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CLINICAL LECTURE.

HYDATID CYSTS OF THE BRAIN; ALTER-
NATE PARALYSIS (OCULO-MOTOR AND
PATHETIC PARALYSIS OF THE RIGHT
SIDE; HEMI-ANÆSTHESIA AND HEMI-
PARALYSIS OF THE LEFT SIDE);
HEMIPARESIS LESS MARKED ON
THE RIGHT SIDE; DOUBLE
OPTIC NEURITIS.

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Gentlemen:—Hydatid cysts are not frequently met with in the brain. Of 363 cases of tumor of the brain recorded by Davaine only in 20 were these cysts found; and in 16 out of the 136 collected by Cobbold. Of the 40 observations made by Morgan, in 10 cases the cysts were found in the cerebral lobes, in 8 in the cerebellum, in 4 in the ventricles, in 2 in the corpus callosum and in 1 in the frontal lobes¹. I wish now to call attention not to the rarity of the disease but to the cerebral troubles, perfectly localized and circumscribed, produced by the presence of a large hydatid tumor. I shall discuss with you the nature of these troubles.

HISTORY.—Alexandrine Devr, 17 years of age, was admitted to the St. Eloi Hospital, on the 22d of June, 1889, during the service of Castan, Sr.

Her family history showed that both father and mother, still living, are victims of rheumatism, and that a sister died at the age of 18 months, from convulsions. In regard to her individual history we learned that in childhood she suffered from cervical adenitis, and later on from a defective menstruation. The present malady began three months ago and was then only characterized by headache and constipation. A month

afterwards, the patient was obliged to go to bed, owing to a moderate continuous fever, accompanied by vomiting, sharp, intestinal pain and an aggravated condition of headache and constipation. These symptoms rendered her unable to get up for a little more than a month until the young lady was taken on the 22d of June to the suburban hospital mentioned. The cephalalgia continued to increase, vomiting became much less frequent, but the constipation persisted. Fever was slight, never going above 38° C. The pulse ranged from 80 to 90.

A marked intellectual apathy was observed; paresis of the extremities came on progressively, and was especially marked on the superior extremity of the left side. The dynamometric measurement gave 19 kilogrammetres for the right and 10 kilogrammetres for the left hand. There was complete loss of sensation on the right side of the body, the same phenomenon being manifested on one half of the face.

Vision was disturbed; on both sides the visual acuteness was diminished V. O. D. G. ½. Perception of colors remained intact. On the left side a slight falling of the eyelid and external strabismus due to complete paralysis of the internal rectus muscle were observed; this latter lesion producing a crossed horizontal diplopia. The pupil was dilated but was still sensible to the action of light and to accommodation. This dilatation was increased by atropine. The right eye exhibited no external abnormal appearances.

Ophthalmoscopic examination showed more marked alterations of the left eye, an engorged disc, and tumefaction—in fact, all the characteristic signs pertaining to an optic neuritis to the typical choked disc. There were also some signs of ecchymosis.

Examination of the different organs, such as the lungs, the liver, the heart, etc., gave negative results; they were apparently healthy.

On the 6th of July the dropping of the right eyelid became considerably increased,

¹ Rabot Kyste hydatique du cerveau. *Progres Medical*, February 23, 1890.

ptosis being finally complete, accompanied by paralysis of the superior rectus muscle.

By the 13th, complete paralysis of all the muscles of the right eye, with the exception of the external rectus, was established, but there was no variation in the size of the pupil.

Finally, on the 15th of July the patient passed suddenly into a comatose state, the respiration became difficult, and death took place in a few hours, without there being noticed, in all the course of the disease any other alteration of the temperature or of the pulse than that mentioned. There were no convulsions, no incontinence of urine, no albuminuria, and no glycosuria.

Autopsy.—There was no inflammation of the meninges. From the moment that the brain was removed from the cranial cavity it was clearly perceived that the right hemisphere was considerably enlarged. On the external face of the right sphenoidal lobe, between the corresponding convolutions, a transparent pouch filled with fluid was found. This tumor, independent of the healthy white substance, of easy enucleation, occupied the posterior half of the sphenoidal lobe and extended to the anterior half of the occipital lobe, without affecting the cortical gray substance. The tumor was not in direct contact with the lateral ventricle nor with the internal capsule, nevertheless they exhibited signs of compression, especially marked at the internal face of the sphenoidal lobe and near the peduncle. Puncture of this sac produced in a rapid and progressive manner a diminution in the size of the right hemisphere, owing to the escape of a clear liquid resembling distilled water, the quantity of which reached 250 grammes. This liquid revealed on examination a specific gravity of 1006, but no albumen or glucose. It contained however 0.74 grammes per 100 of chloride of sodium. The sac was found to be elastic, and under the microscope exhibited no external connective tissue, but was chiefly composed of stratified fibres without any cellular elements. Over two points were noticed small opaque or whitish granular matter. The rest of the encephalic mass was healthy.

REMARKS.—In the presence of this clinical case whose evolution was not entirely studied at the hospital, a diagnosis rested between a tubercular meningitis and a tumor of the brain. Although the temperature and the pulse would exclude the idea of tubercular meningitis, yet, the duration of the malady, the cephalalgia, the vomiting, the constipation, the general paralytic phenom-

ena, and the fact that a sister of the patient had died from convulsions at the age of 18 months, all pointed to the probable existence of that inflammatory affection. The ophthalmoscopic examination alone, however, revealed to us an unmistakable sign and sustained the diagnosis of a cerebral tumor. We discovered, in fact, the presence of a choked disc, characteristic of a tumor of the brain.

True it is that tubercular meningitis produces alterations of the disc as we have had occasion to study before, but these differ so materially in their intensity, that the error of diagnosis could not have been made. Moreover, the tumor by its mere presence in the brain is alone sufficient to explain the various phenomena observed, and especially the motor disturbances which, as P. Grasset has remarked, "show from the very beginning a progressive paralysis." The slight elevation of temperature can only be attributed to the state of congestion determined in the brain at the neighborhood of the tumor. Under such circumstances a correct diagnosis was extremely difficult. That of tubercular meningitis was suggested by the history of the case, by the march of the disease, and even by the signs revealed by the microscope, as the lesion might possibly have been a cerebral tumor of a tubercular nature. But if we excluded this diagnosis to what other cause could be attributed the series of phenomena presented by the case? A careful examination revealed no history of syphilis. Now, vascular tumors, glioma, sarcoma, ecchinococcus and cysticercus are antagonistic, we may so say to tubercular lesions, and out of these different hypotheses we could not formulate a correct or even reasonable diagnosis.

Finally, the anatomical signs exhibited by the ophthalmoscope added nothing to the clearing of the question and taking all into consideration, we could not but ascribe the trouble to the existence of a cerebral tumor.

The anatomical lesions however, were not sufficient, and in nervous pathology we must look for, and determine if possible, a topographical diagnosis. The predominance of paralytic disturbances on the left side, and the anæsthesia limited to the same side, indicated in a clear manner that the tumor rested largely upon the right side of the

¹ Ducamp.—Des manifestations ophtalmoscopiques de la meningite tuberculeuse. These de Montpellier, 1888.

² Grasset.—Traité des maladies du système Nerveux.

encephalic mass. The co-existence of these motor and sensory phenomena, with alternate oculo-motor and pathetic paralysis pointed to a lesion of the cerebral peduncle. It was evident, therefore, that the tumor exercised pressure especially upon the external portion of the root of the peduncle. This alteration in the functional activity of the oculo-motor nerve, could only begin to take place in the deep portion of the peduncle at a short distance away from the anastomotic fibres of the oculo-motor of the opposite side, because the internal rectus muscle was completely paralyzed, the pupil remaining sensitive to light and retaining the power of accommodation. The dilatation of the pupil, finally, showed us that the lesion must be located at the inferior surface of the peduncle, as has been established by Blanc¹. Again, Duval, from his anatomical researches has determined pretty well the existence of oculo-motor fibres at the superior portion of the peduncle, and therefore a pressure upon that part by the tumor could explain the progressive oculo-motor symptoms exhibited by the patient.

In regard to the paralysis of the superior oblique muscle, that was undoubtedly due to pressure exercised upon the pathetic nerve as it surrounds the external surface of the cerebral peduncle. It remains to consider whether these two cranial nerves, the origins of which are situated near each other, were not affected by a nuclear paralysis, and that the succession of paralytic symptoms could not possibly be due to lesion of the anatomical antero-posterior area, which, according to Henson and Volkers,² constitutes the common origin of the nerves in question. But as the internal rectus was totally paralyzed, a nuclear paralysis could not be thought of, for "in nuclear paralysis of the third pair, the movements of the third pair are abolished as regards a converging action, but are intact when the movements are to follow those of the external rectus muscle of the opposite side."³

It became, then, possible to establish a diagnosis of a tumor pressing upon the right side of the cerebral peduncle, upon the sensory portion and upon the motor area containing the fibres of the oculo-motor nerve, and finally upon the pathetic nerve surrounding the peduncle. This diagnosis ex-

plained the symptoms ascribed to a lesion of the right side of the encephalic mass, but it did not explain those ascribed to lesion of the left side manifested clinically in a right hemiparesis. The presence of a tumor, the character of the hemiplegia less marked than that of the opposite side, would lead us to suppose that the left side of the peduncle was also taking part in the productions of the symptoms observed, decreasing, so to speak, from right to left, and that the only portion affected was the motor area, the sensory part and the fibres of the oculo-motor nerve remaining intact.

Thus far, we are obliged to definitely admit the existence of a pressure exercised in a decreasing manner, as has been remarked, by a tumor situated on the corresponding motor area of the right side of the brain.

At the autopsy the diagnosis of these localized lesions was confirmed, but it was found that the tumor of the syheno-temporal lobe had produced its peculiar symptoms not by a direct but by an indirect pressure, and that this tumor, whose diagnosis would place it at the base of the brain, was so voluminous that it even occupied the external surface of the convolutions.

Remember that the tumor had produced sensory and motor symptoms in the extremities of both sides, and it must also be remembered that Chouppe has demonstrated that the internal capsule may be injured by cerebral tumors without producing hemianæsthesia, and that Charcot has observed a hemiplegia caused directly by a voluminous hydatid cyst.

The disassociation of the oculo-motor fibres appears perfectly clear in our case. The stage of the paralysis seems to show that the nerve fibres of the internal rectus muscle were completely paralyzed from the beginning, near the point of pressure, and more to the outside of that of the elevator muscle which was less affected. Later on, the right superior oblique muscle became paralyzed after complete paralysis of the elevator muscle, and lastly the nerve-fibres supplying other muscles lost their power. This succession of disturbances brings to our mind the divisions of Hensen and Volkers, in regard to the origin of the oculo-motor nerve. These physiologists describe, antero-posteriorly, as it were, the following centres: "the origin of the rectus internus muscle at the anterior limit of the aqueduct, above the posterior commissure; then the cellular origin of the superior rectus and of the elevator; following this, that of the inferior

¹Le nerf moteur oculaire commun et ses paralysies. These de Paris, 1885, p. 111.

²Arch. d'Opht. de Græfe, XXIV.

³Féré. Anatomie Médicale du Système Nerveux.

rectus; and lastly, still further back, that of the inferior oblique."¹

The fibres which arise from these origins, to be distributed to the different muscles, have been examined microscopically by Kahler and Pick,² and these authors have divided them into two groups: an external one which contains the fibres of the elevator, the rectus superior and the inferior oblique; and a median group which contain the fibres of the rectus internus and of the rectus inferior.

Our autopsy did not seem to explain this disposition of the fibres, since the order of the paralysis was as follows: internal rectus, elevator, superior rectus, inferior rectus and inferior oblique. All clinical observations could not possibly fail to corroborate the delicate microscopical researches referred to.

In regard to the slow paralysis of the pathetic, it can only be explained by the greater resistance to pressure offered by a nerve already constituted by itself, and not dependent upon radical, disassociated fibres.

If we had left hemianæsthesia and slight hemiparesis of the right side, our case would be clinically one of left hemi-paralysis associated with crossed paralysis of the common oculo-motor, and this, anatomically, would point to a lesion of the peduncle. Benedikt³, of Vienna, says of this lesion that it is "a syndrome characterized by a hemiparesis and a crossed paralysis of the common oculo-motor, associated with tremors of the paralyzed extremities." "In that case," as the author has remarked, "the lesion lies evidently in the cerebral peduncle on the level of the origin and exit of the oculo-motor nerve;" and further states: "The syndrome which I am studying has a great importance, since it shows a localization sufficiently clear to explain the tremors. This motor disturbance is produced in our syndrome by a lesion lying in the peduncle at the origin of the common oculo-motor nerve. In sclerosis, where the tremors resemble those of the disease under consideration, the lesion which causes it is found over the same region." Our case, which presents a change entirely peduncular, does not authorize us to recognize as yet such a localization for the tremors, although the case is different from that of Benedikt, especially in regard to disturbances of sensibility. Again, there is a little

difference also, with regard to loss of sensibility, in a case reported recently by A. Manquat and Ed. Crasset,⁴ in which there was hemianæsthesia, the authors locating the lesion at the cerebral peduncle, a little above the origin of the oculo-motor nerve. On the other hand, in this "instance the tremors are slight and are noticed on both sides." Without wishing to contradict the statement published by the authors, we cannot but conclude that a peduncular lesion does not necessarily produce tremors.

In regard to medical treatment, whatever it may be, it could not give any good results, unless, perhaps, an external opening of the cyst could have been established. Clemencau has seen a case of this nature, where a cure was spontaneously effected. Was surgical interference indicated? No. The tumor was not accessible, as it seemed to occupy the base of the brain, near the peduncle and without any connection with the external surface of the hemispheres. The symptoms were all peduncular and pointed to the existence of a great intracranial pressure.

Now that the malady ended in the death of the patient, we have frequently asked ourselves whether we could have agreed with Money, and allowed trephining to be performed. We mention this apropos of a communication of Webster⁵ about a case of hydatid cyst of the brain, which terminated in death, in which Money expressed his opinion here referred to. We do not forget the good results that trephining has produced in several instances in the hands of Penn, Gilbert Ballet, Gelineau, Lepine, and Lucas Champoniere, which have been reported to the Academy of Medicine⁶, but some of those cases were of a different nature; on the other hand, when we conceive of a tumor reaching the external surface of the convolutions and apparently inbedded within them, then the gravity of the case becomes unquestionable.

In conclusion, we know that this foreign body was an acephalocyst, of considerable volume, developed in the deep portion of the white substance, without known cause, and that its development was accomplished in the course of about four months. This duration is in accordance also with the published tables of Ball and Kriehaber⁷ where the

¹ Blanc. Loc. cit.

² Arch. fur Psych. und Nervenhkr., x, et Prager Zeitsch. fur Heilkunde, 1881.

³ Bulletin Medical, May 1st, 1889.

⁴ Un cas de paralysie alterne de l'oculo-moteur, avec aphsie Corigine traumatique. *Progres Medical*, February 8th, 1890.

⁵ Pathological Society of London, Nov. 6th, 1888.

⁶ February 19th, Aug. 6th and 20th, 1889.

⁷ Art, Cerveau (Tumeurs) in *Dict. Encyclop.*

greatest number of cerebral tumors is recorded, the clinical evolution of such tumors ranging from one to six months.

COMMUNICATIONS.

CLINICAL CONTRIBUTIONS TO BRAIN SURGERY.¹

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In 1885² I took strong ground in favor of more active surgical interference in injuries and diseases of the cranium and brain. At that time the views advocated by me were looked upon as being too radical, and were quite vigorously opposed by many prominent surgeons of this country. Since that date there has been developed an unprecedented activity in the operative treatment of cranial and intra-cranial lesions, which, even in my opinion, has been too extreme. It is, perhaps, not difficult to understand this unscientific and unreasonable adoption of what might be called a surgical fashion. It is to be regretted that the enthusiasm created by success impells some men to interfere surgically in nearly all cases that come into their hands without a judicious study of each particular patient. That unrestrained mania for operating which has made abdominal surgery almost a by-word has, it seems to me, entered into the domain of cerebral surgery. It is just as much a part of scientific surgery to abstain from operating unnecessarily, as it is to combat vigorously the unreasonable conservatism of those who will not see the force of anatomical, surgical, and statistical evidence. Fortunately for the patients a healthy reaction is at last taking place, and surgeons are not now removing brain centres and tunnelling the brain in search of abscesses and tumors in quite as enthusiastic a manner as they were a couple of years ago. That such lesions should be promptly attacked surgically is unquestioned, but this should be done only after a thorough survey of the conditions and a judicial

estimate of the gain that will possibly arise. The experimental character of many operations upon the brain in recent years has been almost as patent as in vivisectional operations done with an avowed experimental purpose. Death on the operating table and unsuccessful operations have at length begun to stay the hands of these over-enthusiastic surgeons; and there is now ground for hope that cerebral surgery will, ere long, become less reckless.

My personal opinions are very much what they were in 1885; indeed, the advances in diagnosis and the improvements in operative methods have made me even more sure of the correctness of the conclusions then advanced. I cannot, however, bring myself to approve of the reckless way in which human life is often threatened by operations which hold out scarcely a ray of hope to the helpless patient. The rapidity of healing in aseptic wounds and the tolerance of the brain under operative attack do not justify hasty resort to intra-cranial surgery simply because the patient or his family are submissive under the persuasive eloquence of the would-be operator.

I desire to-night to report a few cases which have a practical bearing on some of the fundamental principles of cerebral surgery, and I hope they will serve as a means of bringing out the views of others in this interesting field.

CASE I.—*Trephining for cortical epilepsy apparently the result of traumatism; improvement, followed by death in five weeks.*—A child, twenty-nine months old, had sixteen months previously received a fall, and on the second day after the accident was seized with convulsions. Four months before he had been struck on the head by a falling clock, but no special symptoms followed this mishap. Since the second attack he had had spasmodic seizures occurring at frequent intervals nearly every day. He dragged the left leg a little, did not seem bright, and was still unable to talk. There was a slight tendency to draw up the mouth on the left side, and also an inclination to turn the head and body to the left. When his attention was directed to bright objects he would apparently try to look at them, but his eyes usually turned to the left. His hearing seemed to be dull, but so far as could be determined the cutaneous sensibility was unimpaired. No changes were found by ophthalmoscopic examination.

Dr. Charles K. Mills, who referred the patient to me, placed the child under observation in order to detect, if possible, the

¹Read before the Philadelphia County Medical Society, November 25th, 1891.

²"The Field and Limitation of the Operative Surgery of the Human Brain," *Annals of Surgery*, July and August, 1885.

exact character of the spasms. He was watched carefully in several seizures. Usually he squealed at the beginning of the paroxysm and his face had a vacant look. The spasm began with a lifting movement of the entire body, as if with the muscles of the trunk, much like a sudden effort to rise from a recumbent to a sitting position. About the same time, as nearly as could be judged, the eyes and head turned to the left. The eyes did not keep to the left but oscillated with the jerking movements of the body; the head, however, continually turned to the left. The left leg and arm were spastic in slight flexion and were lifted up and projected outward and forward, the limbs on the right side were flaccid, but were projected forward and upward with the jerking movements apparently communicated from the trunk and the left limbs.

Another description of the attacks records that the child awakened suddenly from sleep with a toss of the body, as if badly frightened, with the head and eyes at once turning to the left. The left arm was extended forward and upward stiff and rigid, with the thumb and little finger pointing backward, the other fingers being slightly flexed. Both legs were also tossed upward in the air, the left more projected than the right. His body was lifted up and down during the attacks.

It was difficult to determine any signal symptom or serial order of movements. The spasm was both tonic and clonic, and certainly most marked in the limbs and face of the left side. The movements of the leg and arm were those of projection and protraction, and were rather movements from the shoulder and hip than from and in the distal portions of the limbs. The movements of the head, trunk, face, and limbs were often nearly coincident, but the conjugation of the head and eyes seemed certainly to be most commonly the initial movement.

The above description is taken from a former report of the case.¹

Dr. Mills thought that the symptoms seemed to point to lesion of the area for conjugate deviation of the head and eyes, and certain associated movements of the trunk, thigh and arm. It was, therefore, determined to trephine over the posterior portions of the first and second frontal convolutions.

After encircling the head with a rubber bandage to prevent hemorrhage from the scalp, I made an opening with an inch and

a half trephine placed one and a quarter inches in front of the fissure of Rolando and a little to the right of the median line. Behind and below the opening so made I cut out another button of bone with a one and a quarter inch trephine. The spurs of bone between the two holes were cut away with forceps. One point of the aura was abnormal in thickness and rather more adherent than normal. This condition did not seem to be caused by a Pacchionian body.

A flap of the dura was raised. The pia mater was very cedematous so that it could be pitted with the finger. A thin, yellowish-white membrane was found lying loosely upon the pia-arachnoid and had probably separated from the dura when the flap of that membrane was raised. This abnormal membrane was removed. Small electrodes applied to the convolutions failed to induce conitaction of the left arm. This electrical test was repeated but failed to give results, though no antiseptic solution had come in contact with the brain tissue before the electrodes were used. Incisions in the pia allowed the serum, which caused the cedema, to escape. When the convolutions were thus clearly exposed there was no evidence of change in their structure or of any subjacent lesion. The dural flap was then sutured in position, and the portions of bone, which had been kept in antiseptic solution at a temperature of 105°, were replaced. Some catgut threads were laid beneath the buttons of bone and carried through the incision in the scalp to give drainage.

The child was under my observation for nineteen days, during which time there were only three epileptiform attacks and these were within two or three days after the operation. They were all slight and would scarcely have been recognized as pathological symptoms if the previous severe attacks had not formed part of the clinical history. A large amount of cerebro-spinal fluid escaped for several days through the opening left by the catgut drain, which was removed a day or two after the operation, and also through a small hole in the line of incision which had not healed by first intention as had the rest of the wound.

Bromide of potassium, calomel, and small amounts of alcoholic stimulants were given to the child during the after-treatment.

When he was discharged from under my immediate care his general condition was good, temperature normal, and there had been no escape of cerebro-spinal fluid for three days. The two small openings in the scalp were covered with small crusts.

¹ *Polyclinic*, April, 1886, p. 299.

Two weeks later the child died, but the history of the intervening period is unknown. I heard only indirectly of his death. No post-mortem examination was made, but indefinite information has come to my knowledge, which leads me to believe that suppuration under the scalp occurred.

This case is one of a class in which there is a great temptation to operate in hope of finding some removable lesion of the cortical centres. The findings are usually negative; and the results only temporarily satisfactory, even when the patient entirely recovers from the lesions incident to the operation. Unless the localizing symptoms and signs are more definite than in this instance, I think that in similar cases I shall hereafter be almost inclined to avoid operative interference. This provisional conclusion has been reached by a consideration of cases in the treatment of which I have been concerned, or with whose results I am familiar.

CASE II.—Traumatic epilepsy resulting from unsuspected fracture; trephining with discovery of an irregular projection of bone on the interior of the cranium.—A man, J. H., aged thirty-four years, while working as a puddler, about eight years ago, received an injury on the left side of the head by being caught between an iron lever of a furnace door and a brick wall. He was not treated by a physician, and only lost about two days from his work, although the injured region was poulticed by him, and was the seat of a discharge for four or five months. No portion of bone came from the wound, and there were no special symptoms.

Several years ago he had venereal sores upon the penis, but no suppurating inguinal glands or syphilitic developments. Chills and fever, several years ago, constituted the only illness from which he suffered.

An examination of his head, after shaving, revealed several insignificant scars, and just above the zygoma on the left side, a half inch in front of the auricle, a depressed cicatrix sufficiently deep to hold the tip of the little finger. This was the scar left by the injury received eight or nine years ago. The cicatrix involved the temporal muscle, as was seen by the dragging of the skin over the scar during mastication. There was no evidence of depression of the skull in any other part of the cranium, and this depression did not seem to involve the underlying bone. His intelligence was good; but the patient said that he did not remember as well as he could a few years ago, and that at

times his eyesight was not good. He shows at times a little mental deterioration. An ophthalmoscopic examination of the eyes gave negative results.

The patient states that about two and a half years ago he had an epileptic fit after working in a hay-field on a hot day, and that since that time he has had marked seizures about every six weeks, with lesser attacks more frequently. He has but one epileptic fit at a time, from which he rapidly recovers, and is soon able to walk about. After such attacks he feels weak for some time. For several years he has had severe headache, not confined to any one portion of the head, and just before the epileptic seizure he feels a jerking sensation on the right side of the nose. He complains that his general health has deteriorated, but there is no apparent loss of flesh.

On the 26th of September of the present year (1891), I turned up a large flap of the scalp and found, after cutting through the temporal muscle, a depression in the skull one inch in length and three-eighths of an inch in width. This fracture was a surprise to me because of the history of the case and the situation of the injury over the thick belly of the temporal muscle. A three-quarter inch aseptic trephine was applied above and behind the depression. This cut through the bone with some difficulty, because the upper portion of the disc was much thicker than the lower part. Unfortunately my segment trephine had been forgotten, or this part of the operation could have been more expeditiously performed. Thinking I had cut entirely through the skull, I endeavored to pry out the disc, but removed simply the outer table of the button; I found that between it and the internal surface there was a portion of fibrous tissue entangled. It was probably this portion of tissue entangled in the bony cicatrix as a result of the fracture at the time of the injury that enabled me to lift out so readily the upper surface of the bony disc. The entangled tissue was doubtless pericranium. Removal of the interior table of the disc revealed below and in front of the opening a teat-like elevation projecting from the lower surface of the skull and pressing upon the dura. This elevation was about one-fourth of an inch higher than the general surface of the interior table, and was the apex of an irregular elevation due to consolidation of a number of comminuted fragments of the inner table. The irregular lines of fracture, with the fragments displaced in varying de-

grees, are shown on the button removed and the rest of the bone subsequently cut out with gnawing forceps.

The specimen shows this condition very satisfactorily, though somewhat mutilated by the gnawing forceps with which the adjacent bone was removed after the original button was taken out. The depth of the skull wound and the thickness of the temporal muscle made it rather difficult to operate neatly, and my desire to get rid of the portion of bone pressing upon the dura, without prolonging the operation or increasing its severity, caused me to sacrifice the specimen in the interest of the patient. The dura was not opened, threads of catgut were used for drainage and a dry sublimate dressing was applied.

The following day the wound was found to be healing by first intention, and the drainage threads were removed. Bromide of potassium and chloral were given for two nights, and then twenty grains of bromide of potassium three times a day were ordered as a continuous treatment.

On the third day after the operation the patient had a sensation of twitching at the side of the nose similar to that which formerly preceded the epileptic seizures; but he had no fit. The wound healed by first intention, the temperature never rose above 98.6° , and on the eleventh day after the operation the patient was sent to his home in the centre of the State. He felt exceedingly well after the operation and expressed his satisfaction at the improvement of his condition. I suggested that the bromide treatment be continued by his physician, Dr. J. P. McCleery, under the idea that removal of the surgical cause of epilepsy should be looked upon as only a part of the treatment. I believe that in all such cases internal treatment should be combined with surgical procedures, and that the epileptic habit should be controlled by a prolonged course of bromides after the mechanical cause has been removed.

Seven and a half weeks after operation his physician reported that he had suffered no return of his epilepsy and was about to return to work. As far as it goes this statement is gratifying, but much more time must elapse before we can feel sure of a cure having been effected. The lesion is certainly one of those in which trephining ought to be eminently beneficial. Punctured fracture such as this should always be subjected to immediate trephining at the time of injury.

The following cuts (Figs. 1 and 2) represent the external and internal appearances of the

skull in a case trephined by me some years ago. There was a small scalp wound through which I could with my finger-tip feel what I thought was rough bone. I found by incision that the roughness was due to an unusually irregular lambdoidal suture with Wormian bones; and that the only bony lesion caused by the blow received from

FIG. 1.

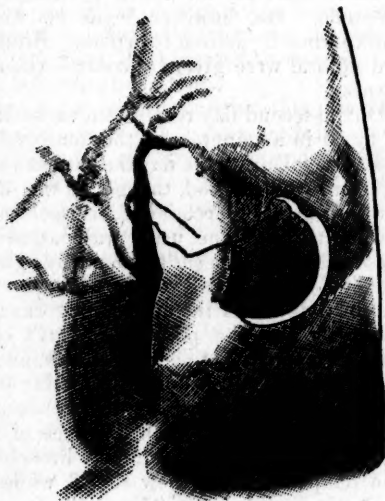


Outer surface of fractured cranium showing lambdoidal suture, point where trephine was applied, and small indentation looking like entrance of a vein made by the blow.

the pitcher, with which the patient was struck, was a small dent, looking like the opening for the entrance of a vein. The character of the vulnerating force, however, induced me to trephine. The removal of the trephine button and the insertion of a probe between the dura and the cranium discovered nothing except a small fissure on the inner surface of the disc. Death occurred within a short time from alcoholic delirium; and the autopsy revealed a T-shaped fracture of the inner table with a shelf-like detachment of quite an area of bone. If this patient had lived he would probably have had secondary epilepsy, as occurred in the case just reported. The urgent necessity of primary trephining in such punctured fractures, even when no symptoms are present, is fully illustrated by these cases. The many deaths from cerebral abscess and other inflammatory processes, following the receipt of punctured fracture

of the cranium, long ago justified the surgical conclusions that trephining in such injuries should not be delayed until the advent of symptoms of encephalic inflammation. The epilepsies resulting in cases which have

FIG. 2.



Inner surface of fractured cranium, showing cut made by trephine and large area of inner table driven inward under the small external indentation. The trephine has not cut entirely through the bone where the inner table is driven inward.

escaped the immediate dangers of encephalitis add another argument to the wisdom of immediate operation in punctured fractures.

CASE III.—Secondary trephining for traumatic epilepsy; death from aseptic cerebral inflammation.—In June, 1891, I operated upon a man, J. T., aged twenty-eight, with the following history:

While working in a mine he had been struck upon the head with a huge mass of coal and rendered senseless. The attending physician, Dr. James D. Harvey, found a fracture of the skull, and upon the day of the injury removed a portion of the bone. According to the patient's statement he recognized no one for fourteen days, and was, therefore, probably unconscious during that time.

After consciousness returned his left arm was paralyzed, but gradually regained power. Eight months afterward he had an epileptic seizure, and has had epileptic paroxysms at irregular intervals ever since.

He is aware of the approach of a convulsion by nausea, dizziness and disorder of vision. Occasionally he has time, after the premonitory symptoms, to sit down before the fit occurs. He thinks that he ordinarily falls in the convulsion, but he does not bite his tongue at such times, though he froths at the mouth and grinds his teeth. The attacks have occurred as often as one or two in a day, but he has gone as long as four months without a paroxysm. The ophthalmoscopic examination reveals a normal fundus, clear media, and hyperopic refraction. He is unable to say in what part of the body the muscular spasm begins.

A large triangular depression is seen upon the right side of the head, the upper margin or base of which is one and three quarter inches to the right of the median line and almost parallel to it. The apex of the triangle points downward and forward toward the ear. The anterior margin of the depression is near or a little behind the fissure of Rolando, and the centre of the depression is over the superior parietal convolution, or in that vicinity. The deepest portion of the depression is that near the middle line of the skull, at which part its depth is fully a half inch; the edge of the depression at this point is almost vertical. The interior and posterior borders are less abrupt. The angle, which I have called the apex of the depressed triangle, is about two inches above the ear, and a little behind a vertical line drawn upward from the ear. The margins of the depressed area form an equilateral triangle, each side of which is about one and one-quarter inches in length. There are a number of other scars on the head, one or two of which radiate from this depression. There is distinct weakness of the grasp of the left hand, but no marked difference in size of the hand or the arm. The patient complains of the left hand feeling differently from the right. There is no muscular contracture and no apparent change in the electrical reaction or in mensuration.

On account of the epileptic attacks in this case I determined to operate and remove any apparent cause of irritation. If nothing abnormal was found, I intended to remove the cicatricial tissue in the bony gap and also the bony margin of the opening in the skull. Accordingly I made an elliptical flap in the scalp which disclosed a triangular depression in the skull corresponding with the indentation seen externally. This was filled in with fibrous tissue, which I dissected out of the bottom of the depression. The bone was so thick that the gnawing forceps

could not cut away the edges, hence, I used an aseptic trephine and removed a disc one inch in diameter from one corner. Subsequently I made four small holes along the edge of the depression with a half-inch trephine and then was able to gnaw away the edges with gnawing forceps. The soft tissues were yellow, and pigmented in places with particles of carbon, evidently due to coal dust ground into the wound at the time of the accident.

Before the operation pressure upon the scalp gave the sensation of a small cavity filled with air under the integument. It resembled the sensation experienced when a varicose vein is palpated. Removal of the skin over the gap in the cranium did not alter this tactile phenomenon. The yellow pigmented tissue, found as above mentioned, was not brain tissue; and when cut through disclosed what looked like the interior of an emptied cyst, because the inner surface of the tissue had a smooth, glistening surface. No fluid escaped or had escaped by puncture. After having dissected away a considerable portion of this material, and having removed the edges of bone along the entire circumference of the bony opening I reached normal brain-tissue. Hemorrhage from the cerebral wound and from the periosteum was profuse. It seemed impossible to stop that which came from the brain and its membranes, which were fused together in an almost indistinguishable mass at the bottom of the deep hole. The triangular opening in the skull measured about two inches along each margin. The pulse became very feeble, counting 165 a minute. Prolongation of etherization and operation seemed unwise.

After unsuccessful attempts to stop the bleeding by ordinary methods, I concluded to grasp all the bleeding points with hemostatic forceps which should be left in the wound. This was done, and five forceps left in the wound with their handles protruding. Iodoform powder was dusted upon the surface of the exposed brain and strips of iodoform gauze packed into the cavity. A few sutures were applied after the flap had been replaced; the gauze strips and hemostatic forceps projected from one corner of the wound. A voluminous dressing of iodoform gauze and cotton was then applied and the patient put to bed. Seven and one-half hours after the operation the dressings were saturated with bloody serum, and, therefore, in order to avoid sepsis, I determined to reapply them and to remove the hemostatic forceps at the same time. This was done

carefully, the gauze withdrawn, and the wound redressed with a dry antiseptic dressing. In drawing out the strips of gauze a little oozing of blood occurred, but this hemorrhage I did not think of sufficient importance to prevent my closing the whole wound with sutures and without drainage.

The next morning the patient showed great restlessness, but was in a condition of hebetude. He, however, made his wishes known when he desired to urinate. Bromide and chloral were given to control the restlessness.

On the second day respiration varied from 25 to 40 in a minute, and the temperature was 101°. During the day the patient's condition was fairly good, though he was difficult to control on account of his restlessness and irritation. The urine was passed unconsciously. A turpentine enema was given; bromide and chloral were continued. On the third day after the operation it was necessary to give the patient one-sixth of a grain of morphine hypodermatically, and to strap him in bed because of his tossing from side to side. During the day he became hoarse, and I discovered at the base of the right lung harsh râles, probably bronchitic. The temperature was now 101.6°, while his respiration was between 35 and 40.

On the fourth day after the operation the note is made that he slept after a hypodermic of morphine, one-sixth of a grain, and is quieter. Respiration 40 to 45. His breathing, however, was embarrassed and harsh, somewhat of the Cheyne-Stoke's type. At 7 P.M. respiration was 50; temperature 102°. The wound had been left undisturbed since the evening of the operation when the hemostatic forceps were removed. The rise in temperature and the patient's restlessness made me fear that there had been something amiss in my antiseptic precautions. I, therefore, determined to inspect the wound. Upon removing the dressing, I found the flap bulging and detected a feeling of fluctuation when my finger was put upon it. I expected to find pus under the flap, although the wound had healed by first intention. I tore open the union, but no evidence of pus existed; a soft aseptic clot of blood, however, lay under the flap. I removed the clot and explored the cranial cavity through the operation wound with my finger in search for pus. The cerebral tissue was disintegrated and soft, but no purulent collection was found. I moved my finger in various directions in the pultaceous mass, and finally, when my little finger was buried its entire length, came upon a hard mass at the

bottom. This, I presume, was one of the great ganglia. The tissue overlying this part was almost fluid. There was no odor of decomposition nor evidence of pus. At the time of this exploration the patient was moribund, and I felt fully justified in these radical measures. Unless I found pus he was sure to die.

The dressings were reapplied; hypodermatic injections of strychnine were given. Respiration gradually failed and the patient died the next morning, which was the fifth day after the operation.

It seems hardly possible that the fatal symptoms were due to pressure from such a small amount of hæmorrhage under the flap, since there was much space by reason of so much bone having been cut away; and, moreover, the blood, if causing tension, would probably have readily escaped before the wound had united. I concluded, therefore, that death occurred from aseptic cerebral inflammation leading to disintegration and softening of the brain tissue. The pulmonary symptoms may have been secondary; or he may have had a congestion, preliminary to an acute pneumonia, acting as a prominent feature in the fatal result. Rapid respiration was certainly an early symptom.

The case is to me exceedingly instructive, because the indications for operation were clear, and because death occurred notwithstanding what seemed to be perfect aseptic conditions of the wound, during its entire course. It is a good illustration of the fact that modern surgery has not rendered serious operations entirely devoid of dangers. The diminution of the death-rate in operations has been great in recent years, but certainty of recovery is by no means as absolute as some reporters of operations would have us believe.

The next case is reported because of the youth of the patient.

CASE IV.—*Trephining for depressed fracture of the skull in an infant seven months of age; recovery.*—A mother, while carrying her seven months' old child along a railroad track, fainted or had epileptic seizure, and fell, dropping the child. When she regained consciousness the baby was whining and fretting a little, but did not seem badly hurt. After the mother reached home and removed the child's wraps she discovered a large indentation of the skull on the right side of the head, which she supposed was due to the child's head having struck against a railroad tie, or upon the iron track. The baby did not have any symptoms of brain implication.

When seen by me on the next morning the infant was perfectly comfortable, had slept well all night, played as usual, and had a good appetite. The mother believed the depression to be less marked than when the accident occurred. Examination revealed an irregular depression in the parietal and occipital region on the left side of the head. The lower extremity of the vertical diameter of this depression was about two centimetres above and five centimetres back of the top of the ear. The depression extended upward six centimetres. The horizontal diameter—that is, that parallel to the sagittal suture—began at a point near the anterior portion of the posterior half of the parietal bone, and extended backward six centimetres, very nearly bisecting the vertical diameter. The depression at its deepest portion was fully a centimetre below the surface of the skull.

At this time the patient's temperature was normal; pulse 120. During the night two grains of sodium bromide were given because of slight restlessness. The bowels were opened by a soap suppository.

On the second day after the accident I found the child feeling well and the depression less marked than on the previous day, when I made the first examination. I felt unwilling, however, to let the injury go without surgical treatment and therefore determined to make at least an exploratory incision, because the injury had been so severe as to make a very deep depression. The possibility of secondary symptoms, such as epilepsy or impaired intellect, seem to me to indicate this slight operative interference.

An Esmarch's bandage was carried around the head before the incision was made to prevent bleeding. A horseshoe flap was then dissected up at the point of injury. The bone was markedly depressed, showing a condition similar to green-stick fracture. I thought I could cut through the cranium with a strong knife but found it necessary to use a trephine. A small trephine opening was made through very thin bone at the anterior edge of the depression and the portion pushed down upon the brain easily elevated with the end of a grooved director. A few bleeding arteries were twisted, and the edge of the scalp wound drawn together by catgut sutures. Boric acid powder and dry sublimate dressing was applied.

The patient reacted from ether promptly and went quickly to sleep. Two grain doses of sodium bromide were given at intervals until ten grains had been taken. The patient was restless through the night, but a few

drops of paregoric quieted. The bowels were kept open by injections of oil.

The temperature the day after the operation reached 101.8°, but soon all symptoms of fever disappeared, and on the seventh day the dressings were removed. The wound was found to have healed by first intention without suppuration.

At the end of the sixteenth day the patient was sent to his home in New Jersey entirely recovered.

In this case the accentuated character of the depression was the factor which led me to adopt operative procedures, although I know the tendency for depression of the skull in healthy infants to correct itself spontaneously.

About eighteen months ago I saw a child who had received during birth a very marked indentation of the skull because the head had become locked on the promontory of the sacrum during delivery. The depression was situated on the left side of the head, and included portions of the frontal and parietal bones near the anterior fontanelle. It was about two and a half inches long and quite deep. The case was one of difficult labor requiring forceps at the hands of Dr. Anna M. Fullerton, and the child, when born, was in the first degree of asphyxia, requiring the warm bath and artificial respiration. The child had frequent convulsions, beginning twenty-four hours after birth, evidently due to implication of the brain; yet I declined to operate because I thought that the indentation was probably not associated with actual fracture of the soft bone. The convulsions ceased within twenty-four hours, and although the patient was under observation for several weeks, I never could convince myself that operative procedures were justifiable. The depression gradually lessened and when the child was last examined by me seemed unimportant. The medicinal treatment of the child consisted of sodium bromide and potassium iodide. I have sometimes felt in regard to this case that the subsequent history might perhaps show that it would have been better to have interfered. I have not been able thus far to succeed in tracing the subsequent history of the little patient.

CASE V.—Specimen of cerebral tumor which could have been readily removed by surgical means.—The brain herewith presented shows a tumor occupying the parietal region and was obtained from a subject in the dissecting-room of the Woman's Medical College of Pennsylvania. The history of the case, is therefore, exceedingly indefinite, though through the courtesy of Dr. George

S. Robinson I have been able to obtain the following notes:

The patient was a woman, aged 35 years, of intemperate habits, who had, so far as known, no injury of the head and was not discovered to be syphilitic. She was an inmate of a public institution and was sent to its infirmary about a week before her death, complaining of pain in the head which seemed to be somewhat relieved by pills of an anti-neuralgic character. The headaches continued, however, notwithstanding medication, and for about two days vomiting occurred. The patient then became comatose and paralysis of the right arm and leg supervened. The pupils were somewhat dilated and did not respond to light. Respiration was slow and the face flushed. No convulsions occurred, but there were slight twitching of the facial muscles. The patient was not noticed to be blind or deaf. Death took place on the sixth day after admission to the infirmary.

An examination of the specimen (Figs. 3 and 4) shows a flat, circular tumor in the right parietal region lying between the dura mater and the cerebral hemisphere. The convolutions are pushed downward but are not infiltrated in the least degree. The dura has not been preserved, but it is quite evident that the growth was attached to the inner surface of the dura, since its upper surface is torn and it has no attachments to the convolutions, but can be lifted out of its bed without disturbing their integrity. The tumor is almost circular when inspected from above, being 6 centimeters in the anteroposterior diameter, and 6.5 centimetres in the transverse diameter. It is flat from above downward, varying from 2 to 3 centimetres in thickness. It occupies the right parietal region upon the superior aspect of the cerebrum. Its anterior margin lies in a line with the callosal-marginal fissure, and pushes forward the ascending parietal, or posterior central, convolution. The tumor extends backward to the parieto-occipital fissure crowding downward and backward the first occipital convolution. It extends outward and downward to the posterior end of the parallel fissure, or the first temporo-sphenoidal fissure, pressing upon the angular gyrus. The first and second parietal convolutions are flattened and lie underneath the tumor in the concavity made by its growth and producing pressure downward. On the inner aspect of the hemisphere the tumor presses the convolution downward, being nearly 2 centimetres thick where it lay in contact with the falx. The anterior

edge of the tumor is about 1 centimetre further forward than the posterior edge of the corpus callosum. The gyrus fornicatus and

FIG. 3.

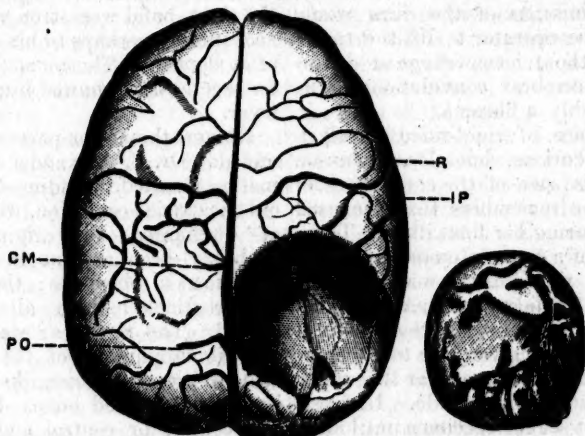


Diagram showing relations of brain tumor. R, fissure of Rolando; IP, inter-parietal fissure; PO, parieto-occipital fissure; CM, callosomarginal fissure. The tumor has been lifted out of its bed.

the precuneus are pressed downward, but the cuneus does not appear to be pressed upon or displaced. Its location behind the motor area is probably the reason that the patient's symptoms were

FIG. 4.

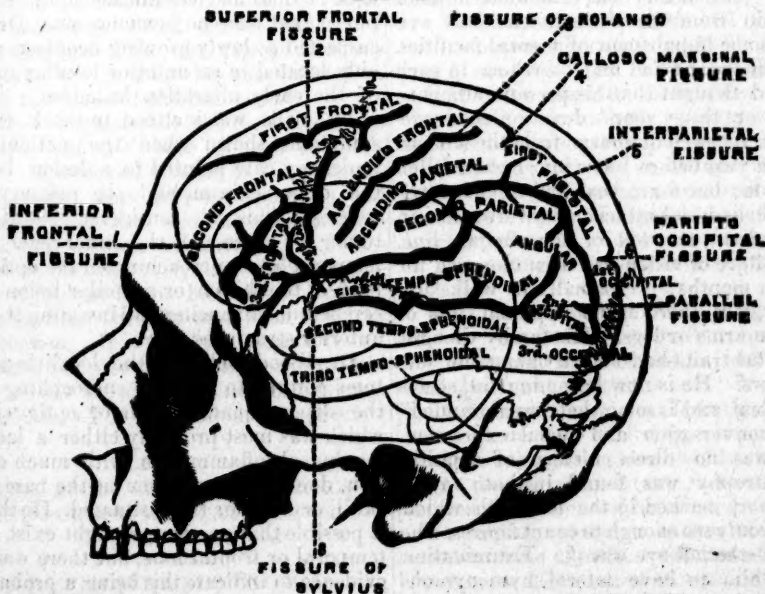


Diagram showing lateral view of the cerebral convolutions and fissures, to aid in making the description clear.

No surgeon can look upon this specimen without a feeling of regret that he could not have had an opportunity to attempt its removal. Its location immediately under the dura, its freedom from attachment to the cerebral convolutions and its moderate size

not marked until just before the fatal termination of the disease. Her habits of life and surroundings were such that she would

not be likely to call a physician's close attention to the early manifestations of cerebral disorder, if indeed these were apparent to the patient herself. A large opening made with trephine, gouge, or saw, followed by a similar incision of the dura would have enabled the operator to lift the tumor from its bed without hæmorrhage or disturbance of the cerebral convolutions. The growth is probably a fibroma.

The occurrence of right-sided paralysis seems rather curious, but Dr. Robinson states that he is sure of the correctness of this note, for he remembers that she used her left hand during her final illness. There is no evidence of a second tumor on the left side. Possibly the growth may have so pressed against the falx as to have impeded the current in the superior longitudinal sinus, and thus have given rise to pressure on the left cortical centres near the upper end of the fissure of Rolando. Unfortunately, I did not see the specimen until after the dura and falx had been removed.

CASE VI.—*Probable basal cerebral tumor, in which operation was deemed inadvisable.*—In September, 1889, a man, aged thirty-four, was referred to me by Dr. H. C. Bloom, who had reached the conclusion that his patient was probably suffering with brain tumor. The history was somewhat difficult to obtain from the patient, who had evidently some impairment of mental faculties. In childhood he had had otorrhœa in each side, and thought that his present ailments, of two or three years' duration, had succeeded a renewed discharge from the left ear. About a year before I saw him he had fallen insensible; but for a year and a half previously he had had attacks of severe pains in the head, to the left of the median line. Some failure of vision had been observed for eighteen months; occasionally he walks unsteadily, but there is no apparent loss of power in arms or legs. His family thought his mental traits had shown change for several years. He is now becoming fat, sleeps a good deal, and is somewhat "weakminded" in his conversation and facial expression. There was no direct history of syphilis. Optic atrophy was found in both eyes; being more marked in the left, with which he could only see enough to count figures. The vision of the left eye was Δ . Examination showed him to have lateral hyponymous hemianopsia and Wernicke's pupillary reaction. The fields of vision indicated a left-sided lesion. No deviation of the eyes was determined, but he thinks he has at times had double vision. Both tympanic mem-

branes were perforated. He had had no epileptic seizures, but, as above stated, had once fallen unconscious. The urine had a specific gravity of 1010 and contained neither albumin nor sugar. The grasp of the right hand was stronger than the left, accountable perhaps to his profession—that of a dentist. Thermometric examination for several days showed him to be free from fever.

No anæsthesia nor paresis could be determined. Dr. B. Alexander Randall's examination resulted in finding in the left ear an old cicatricial condition, with a mere trace of discharge. The original trouble had probably been present in childhood, and was now in abeyance; though occasional exacerbations had in all probability occurred. The right ear was in a state of chronic suppuration of the attic and adjacent cavities, with some likelihood of the existence of diseased bone. No involvement of receptive or central auditory apparatus was discovered by the use of tuning forks. The patient's symptoms were thoroughly studied for me by Drs. Charles K. Mills, H. C. Wood, Edward Jackson, B. A. Randall, A. W. MacCoy.

From Dr. William Osler, who had seen the man some months before, I learned that then he had had an intense optic neuritis, but at that time no hemianopsia. Dr. Osler suspected a slowly growing neoplasm; probably located in an anterior location, because of the early alteration in habits.

Dr. Mills was inclined to think that the symptoms shown when the patient came under my care pointed to a lesion between the optic chiasm and the primary optic centres. This he considered might be a tumor or abscess of the inner part of the temporal lobe, encroaching on the optic tract back of the chiasm or a similar lesion of the cerebellum advancing and invading the more anterior structures.

Dr. Wood believed the localizing symptoms pointed to a lesion encroaching upon the corpora quadrigemina or optic chiasm, which was most probably either a localized meningeal inflammation with much exudation, due to diseased bone at the base of the skull, or a tumor there situated. He thought it possible that an abscess might exist in the temporal or frontal lobe, but there was little evidence to indicate this being a probability.

This case was one that offered a good many points of surgical interest; but after determining that the lesion was probably basal and on the left side, I declined to operate, because there was no evidence of

the left ear being a probable cause of intracranial suppuration. If the symptoms had pointed to a right-sided lesion, the condition of the right ear would have influenced me strongly toward operative measures, looking to the evacuation of a temporal abscess. The association of chronic aural suppuration with cerebral abscess is so well known that I think I should have strongly inclined to exploratory trephining.

I accordingly declined to operate, and sent the patient home. I heard from him frequently, but he gradually lost vision and mental power. I had arranged for, and obtained permission for an autopsy; but when he died the past summer no word was sent me. Previously to death he had violent pain in the head, a prolonged chill, several successive convulsions and coma with high temperature. These symptoms occurred suddenly and terminated fatally in four days. Before that time he thought his eyesight, which had been almost totally lost, was improving. The time he survived after my examination, nearly two years, leads me to believe that our abstinence from operation was correct; since the lesion was more probably a tumor than an abscess. If a tumor, its removal was certainly impossible.

This case presents a picture different from the specimen before you, in which the tumor could have been lifted out so readily. I show a diagram of the cerebral convolutions which may aid in following the description of these two cases of cerebral tumor.

I fully recognize that the record of these few cases has not been one of brilliant results. The death of some of the patients, and the short time between operation and this report in others, make the communication in some respects unsatisfactory. It has seemed to me, however, that there are elements of interest in the histories which will afford food for thought and open the way to discussion. It is for these reasons that I have been tempted to give these clinical histories which are certainly not in any way remarkable.—For discussion, see Society Reports.

DETAILS ABOUT COLORADO SPRINGS IN THE CLIMATIC TREATMENT OF PHTHISIS.

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In spite of the numerous so-called "cures" for phthisis which have been recommended

during the last few years, the only established fact of value which stands fast is that there are certain localities where the disease rarely or never occurs, and that very many patients, sent from elsewhere to some of these places, may recover entirely from it. In the light of this fact the choice of situations for our consumptive patients is a matter of the utmost importance, as upon it may depend the issue of the case.

In a former paper¹ I endeavored to lay stress upon the existence of a *climatic idiosyncrasy*, or, as it has also been called, "individual adaptability"; viz., that often for no apparent reason a climate which suits one individual may in no way suit another. Although we may sometimes base upon the general characteristics of a patient an opinion as to what sort of climate will probably prove most suitable, we are oftener but little able to determine this in advance, and are obliged to make our decision in accordance with the results which have been obtained by general experience in the largest number of years.

Nearly all statistics go to show that the results in the climatic treatment of phthisis are much better at high altitudes than at low. The truth of this is evident in the following tables, constructed from the carefully compiled statistics of Dr. S. E. Solly², which are based upon all the published statistical results obtainable and suitable for the purpose of analysis. (In Tables I, II, and III.)

It is to be noted in these tables that the "benefited" includes both patients who have improved and those actually cured.

Comparing now the condensed results in a third table, we have an excellent illustration drawn from the comparison of a large number of cases, of the therapeutic value of high altitudes in phthisis as compared with low.

With the knowledge of these statistics we may be in a position to recommend a high altitude to our patients, but beyond this it is sometimes very difficult to pass. We must be guided here largely by such features as convenience, comfort of living, pleasurable society and occupation, and the like, which are by no means unimportant factors in determining the amount of benefit to be obtained.

In reading somewhat extensively the literature of the climatic treatment of phthisis,

¹ Climatic Treatment of Phthisis. Medical and Surgical Reporter, Feb. 14, 1891.

² Denison. The Preferable Climate for Consumption. Transac. Ninth Intern. Med. Congr. Vol. V.

³ Advanced sheets furnished by Dr. Solly from his articles in Hare's System of Therapeutics.

I have been impressed by the absence of exact information concerning these details of the various health resorts, at least in many of the books and articles consulted.

Having but recently returned from spending several months in Colorado Springs, and having endeavored by observation and interrogation to learn some of the facts regarding it, I am led to offer the following informal remarks in the hope that they may prove of some use to colleagues about to send patients to the west.

From the point of view of *climate* alone there is probably little to choose between various parts of Colorado and the surrounding country. It is much alike in all, and, except that the soil of some places is more clayey, and therefore not to be preferred, one locality can hardly be selected above another. As regards, however, actual comfort in living, Colorado Springs presents certain decided points of advantage. It was founded about twenty years ago as a health resort, and has remained typically such. It is situated on a table-land 6000 feet above the sea and about six miles to the east of the foot of Pike's Peak. It is seventy-five miles south of Denver and forty miles north of Pueblo, on the main line of the Denver and Rio Grande railroad. The outlying range of the Rocky Mountains, of which Pike's and certain other peaks are members, is in full view, while in the other direction, to the east, is an uninterrupted view of the plains—a peculiar and beautiful combination rarely seen.

The houses are for the most part far apart, and each, even the small ones, surrounded by its own plot of ground. There are several handsome business blocks, but the town does not do much business in proportion to its population. Large numbers of trees, chiefly the rapidly growing and leafy cotton-wood, are planted along the streets, making them very shady in summer. Indeed, seen from the top of Pike's Peak, Colorado Springs looks like a small patch of forest.

The trees, however, are no indication of dampness, for, planted as they are in a soil which is almost purely gravel, they would promptly die were it not for persistent and watchful irrigation. The same is true of the really beautiful summer grass. Nothing but the greatest care coaxes the verdure out of plains which would otherwise be arid.

Colorado Springs is provided with a system of rapidly moving trolley cars, which not only carry passengers to different parts of the city, but extend as well to Manitou

and other situations in the surrounding country.

There are numerous good drives, leading both towards the mountains and the plains. The celebrated Garden of the Gods is a drive of but four miles from the town.

The gravelly soil, already alluded to, is so dry that one cannot but be struck by the curious disappearance of the snows in winter. Walking about one can kick this up and find only dust underneath. In fact the snow seems not to melt but to evaporate. Only when exceptionally heavy does it produce mud, and this lasts only for a short time—a day or less.

The evaporation of the snow and the rapid disappearance of any mud is of course in great measure due to the extreme dryness of the air. Persons newly come to Colorado often complain of this, as it causes chapping of the lips, uncomfortable dryness in the nose and the like. I have in fact, noticed some invalids drawing in with pleasure the air of an occasional damp day. To the majority, however, the dry air is peculiarly pleasant and invigorating. Meteorological observations¹ showed a relative humidity for the vicinity of Colorado Springs for four years of only 45.8, as compared with 65.8 for Los Angeles, 69 for Jacksonville and 70.2 for New York.

Sunshine in Colorado Springs is abundant. The number of clear days estimated for five years gave an average of 194, with 128 fair and 43 cloudy days. The average yearly number of cloudy days in New York, estimated for the same time equalled 109. The amount of rain-fall is, as a rule, very small. The average yearly fall estimated for ten years was 15.87 inches, as compared with 42.7 inches in New York.

As in all places of high altitude the direct rays of the sun are powerful. In summer the days are often hot, but rarely so oppressive as in regions where the air is moist. In winter, on the other hand, the warm sun's rays enable patients to sit in the open air a large portion of each day.

Other characteristics of high altitude seen in Colorado Springs are the sudden and violent winds and the rapid alterations of temperature. These are, of course, distinct disadvantages, so far as *comfort* is concerned. Unfortunately an equable climate, with gentle zephyrs and the like, is only to be found at low altitudes, and usually in the warm moist regions so unsuitable for consumptives.

¹ S. E. Solly. Invalid's Day in Colorado Springs. Transac. Amer. Climat. Assoc. 1897.

With the wind and the gravelly soil one encounters at times dust storms which are extremely disagreeable. As to their hygienic effect I cannot do better than quote the words of a phthisical but convalescent lady whom I had the pleasure of meeting. "It seems strange," said she, "that it should be beneficial to swallow dust by the tablespoonful, but it appears to do no harm."

I should however give an erroneous impression did I imply that violent winds and dust storms were an every day occurrence.

The prevailing wind during the night and early morning is north or northwest, which commonly shifts in the afternoon to south or south-east.

Any further details regarding the weather of Colorado Springs can perhaps best be treated under a brief review of the different seasons. During the summer months, especially rare in July and August, thunder showers of short duration are exceedingly liable to occur in the afternoon; the bulk of the annual rain-fall taking place at this season. The mornings, however, are almost always clear. The nights are never damp and foggy as in late summer in the east, and I have never been able to perceive dew. The heat of the summer sun is evidenced by the thermometer rather than by the sensations, owing to the rapidity of evaporation of perspiration. At times, however, the days are as warm as in the east, but the nights are nearly always cool, and blankets are usually required on the beds.

Probably the most charming season of the year is autumn. For weeks at a time it may be that scarcely a cloud will be seen and but little rainfall. Patients can spend the entire day in the open air, and even the evenings are not injurious. The same is true of winter. Frequently the temperature in the night at this season is quite low; and now in the daytime, one realizes the difference between the sunny and the shady side of the street. The power of the sun under these circumstances can only be appreciated by those who have experienced it. The very low temperature of the northwest is uncommon, and the cold is not penetrating as is the damp cold of the east.

Spring is the least pleasant time of the year. It must be remembered, however, that seasons occasionally occur in which the amount of rain-fall and of dampness is in decided excess of the average.

In March and April there is apt to be a good deal of cloudiness with frequent snow, though, as stated already, the snow rarely produces mud. In comparison with an east-

ern early spring the weather is very pleasant. Occasionally during the winter and spring there prevails a peculiar hot west wind, probably coming over the mountains from the Pacific, and called the "chinook."

Turning again to some further details concerning the town and the method of life of those seeking it:—

In Colorado Springs are situated a general hospital under the charge of the Sisters of St. Francis, the State Asylum for the Deaf, Dumb and Blind, the new Printers' Home in course of construction; the Colorado College for the young of both sexes, a club and fine club-house and two sanitarium, the Bellevue and the Glockner. Both of these latter are benevolent and most deserving institutions, intended primarily for those whose means are limited. Both have been recently erected.

I have personally inspected the Bellevue. It is pleasantly situated on elevated ground, is tastefully built and furnished, and cannot but be a comfortable and cheerful home for its inmates. It is in no sense like a hospital in its internal arrangements. The patients are located in separate rooms. Those well enough to do so meet in a common parlor and dining-room. Trained nurses are in attendance, and the physicians to the institution are among the most prominent of Colorado Springs. The rates of board are \$8.00 a week and upwards according to room, but even when the institution is full this hardly pays expenses. Nevertheless, cases unable to pay anything are admitted free at the discretion of the managers and physicians.

The Glockner sanitarium is conducted on the same general plan. The rates of board are \$7.00 a week and upwards. A limited number of free patients are admitted. Externally it is a comfortable-looking, roomy brick building.

Colorado Springs possesses a most pleasant social life. A comparatively large proportion of the population consists of people of means and cultivation, there in the pursuit of health and engaged in no engrossing business. The society is cosmopolitan. The wants of the inhabitants are well supplied by shops of very good grade, which are confined chiefly to a portion of a single street. The markets are good. On account of the somewhat shifting population numerous houses furnished and unfurnished and of all sizes are always to be rented. The rates of rent, and indeed all expenses of living are higher than in most parts of the east. Furnished houses of six to eight rooms bring

from \$35 to \$60 per month, and larger ones in proportion. Unfurnished houses are of course less expensive, and it is the custom of the furniture dealers to sell their goods with the agreement that they will receive them again at about half price when the customers break up housekeeping.

My own observation leads me to believe that where whole families come to Colorado Springs for a protracted stay it is often both more comfortable and more beneficial to keep house even though in a very small way. In some parts of the town pleasant apartments of two or three rooms may be rented for housekeeping by those whose means do not warrant taking a whole house. Wages of domestics are high—from \$20 to \$30 a month.

The hotels or boarding houses may be patronized by those not desiring to keep house. Of the former there are several, the largest possessing 200 rooms. Rates at the hotels are from \$5 a day down, with some reduction for a continuous stay. For a winter residence at a hotel it is extremely desirable to obtain a room heated by an open grate or a stove rather than by steam, as the latter is less easily controlled and provides less perfect ventilation. In fact the steam heating often makes the hotels unbearably hot in winter. Boarding houses are numerous. At the best known, table board costs \$8 to \$9 weekly, and a room averages \$20 a month; making a total of about \$12 a week. In less fashionable parts of the town good board including room may be had for \$8 to \$9 a week or even perhaps for less.

For those whose health permits of it, probably the most convenient plan is to choose a room to suit and to go out to a hotel or boarding house for meals. For women and for very delicate men this is frequently not feasible.

Driving and riding are the principal occupations of all invalids whose strength and means permit. Horses are cheap. Well broken bronchos can be bought for from \$40 to \$60 and ordinary horses for a slightly higher rate. Stabling costs from \$17 to \$20 a month, and it is probable that even still better rates could be obtained. Livery stables are numerous and safe horses can easily be hired. The use of a horse and carriage for a half day costs only \$2, and a horse and saddle \$1.50 for the same time. The rates are less if taken by the month.

Comparatively few sufferers from pulmonary diseases are unpleasantly affected by the high altitude even on first arriving.

But it is well to avoid much exercise at the beginning. It is a mistake to suppose that the more one exercises the better. At first simply to be out of doors, even though confined to a chair, is all that is to be recommended. The invalid should endeavor to spend several hours of each good day in the open air. Later, as strength increases and as one becomes acclimated, short walks and drives are desirable. For those in whose cases no contra-indication exists, horseback riding will be found exhilarating and healthful. It increases the vital capacity most decidedly. It is often supposed that especial virtue attaches itself to sleeping in the open air in summer. I cannot but feel that such a course is to be adopted with great caution. For those unusually robust it may be excellent, but for many it is unsuitable and merely exposes them to the risk of taking cold without offering any real advantage in lieu thereof.

I wish, too, to emphasize the great importance of wearing suitable clothing. Recent arrivals are very commonly attacked by coryza and bronchitis; attributed often to the dust, but due really to the lack of a proper appreciation of the need of watchfulness against temperature changes. In winter great coats and wraps must always be ready at hand. Woolen underwear should be worn, though this need not be thicker than is required in the east. For delicate persons with poor circulation, who tend to feel chilly at night, woolen night-wear will be found a great comfort and safe-guard, as the bed-rooms grow cold before morning. In summer women may wear wash dresses and thin underwear in the middle of the day, but should change to silk or woolen dresses for the evening; and men should not hesitate to assume light overcoats on the first evidence of chill in the air. No one should take a horseback ride of any length on summer afternoons without carrying a good rubber coat along.

It might seem hardly necessary to add that imprudences of all kinds should be carefully avoided, and yet it appears to be a common idea with many patients that coming to Colorado Springs is all that is needed to effect a cure; and invalids are often most negligent in this matter. As one writer on Colorado has pithily put it:¹ "There is no country where the invalid fool is more surely and quickly punished for his neglect of good advice." On this account

¹S. E. Solly. Invalids suited for Treatment in Colorado Springs. Transac. Amer. Climat. Assoc. 1888.

it would be best for careless patients to be sent to one of the sanitarium referred to, as results in closed resorts are known to be much better than elsewhere, other things being equal. In fact there is hardly a question in my mind that all phthisical patients in whom the disease is in an active state are better treated in sanitarium. The very good results obtained at Görbersdorf and Falkenstein in Germany are to be accounted for largely by the constant supervision to which the patients could be subjected.

It would be well for all invalids to put themselves under the care of a local physician as soon as possible, even if they do not need treatment. Only in this way can it be determined whether they are profiting by their stay, and how long this should continue.

But a few matters remain to be considered. First of these is the question as to what phthisical patients should be sent to Colorado Springs. Of course those in the first stage of the disease offer here as everywhere by far the best chance of ultimate recovery. The earlier patients are sent the better. But even in the second stage, unless the disease is very wide-spread, permanent improvement may be looked for. Patients with cavities or with evidence of rapidly advancing disease are rarely benefited. At the same time such patients inevitably die at home, and as some remarkable cures have been effected by the treatment at high altitude I cannot but regard it as sometimes worth while to give them the chance for life, provided always that they or their friends are made to understand that but little is to be hoped for, and that a certain degree of risk attends the trial. Certain patients with very nervous dispositions are unsuited for residence at high altitudes, the great increase in the nervous excitability interfering with any good which might otherwise be obtained. Serious valvular heart lesions, especially when not well compensated, or any evidence of cardiac weakness and irritability renders the advisability of sending phthisical patients to high altitudes very questionable. Cases of phthisis florida are as doomed in Colorado Springs as elsewhere, and no possible good can be anticipated in such.

To the question in what season of the year patients should be sent one can only answer, in any. Although the spring, as stated, is less pleasant than other seasons, yet it is certainly to be preferred to the spring in the east. Patients may lose valuable time by delaying their departure for any certain season. I would strongly urge against it.

How long patients should stay can only be determined by trial in each case. A year is probably the shortest time ever necessary. For some a life-time is required. Experience seems to show that, once cured, patients have as good a chance of living at low altitudes as though the cure had not been accomplished at a high elevation. I have been unable to find any proof of the wide-spread opinion that those going to Colorado for health can, because of this act, never live again in the east. Patients who have apparently recovered and who come east and again fail in health, would probably have perished long before had they persisted in remaining at a low elevation.

I have not yet said anything of the surroundings of Colorado Springs, and at least a short notice is demanded.

Manitou, about five miles distant, is a well-known place of resort, particularly in summer. It possesses the mineral springs from which Colorado Springs is named, as there are no springs in the latter place. It is pleasantly situated close to the foot of the range of mountains of which Pike's Peak is one, the houses extending up among the foot-hills, and the place having somewhat the appearance of an Alpine village. For a summer residence it would be most pleasant, as it is a centre for tourists and is full of life and excitement. In winter, however, nearly all the hotels are closed. For those desiring to make a prolonged stay in the west; i. e. for invalids, I should consider Colorado Springs more agreeable.

Upon the plains and at the foot of the mountains and a couple of miles or so to the south of Colorado Springs is Broadmoor. The view of the plains at this point is superb. But few dwelling houses are as yet built, though doubtless the increasing size of the town will make building at this place and elsewhere in the suburbs a certainty in the near future. Broadmoor has already become a favorite resort for the afternoons and evenings, as it possesses a handsome casino with excellent cuisine. During the past summer music has been dispensed by a small orchestra of high order. Attached to the casino are pleasant grounds and a small lake. Near by is the building of the Colorado Springs Country Club, already a favorite institution though but recently organized.

There are certain phthisical patients whose health does not flourish during hot weather. For these, and for any who find summer heat disagreeable, there are a number of situations close to Colorado Springs

which will be found pleasant during July and August. The Ute Pass, leading from Manitou northward contains several such mountain resorts of an elevation of from 7000 to 8000 feet. Among these may be mentioned Ute Park, Woodland Park, Green Mountain Falls, Cascade, and Manitou Park. At a still greater elevation is Summit Park. All of these are easy of access and much frequented by invalids from Colorado Springs. Of course there are numerous other resorts in the State, somewhat farther away, though easily reached. I spent two months at Manitou Park and found the hotel pleasant, and the situation and weather delightful. Through all this region one is practically among the pines. All of these places offer excellent facilities to those desiring to tent during summer.

None of these mountain resorts should be visited before July, and the remarks already made about the necessity of taking care in every respect apply to them with especial force. An invalid should never visit them in summer without taking warm, as well as cool clothing.

VIN. IODINII COMP. IN THE TREATMENT OF CATARRHAL AFFECTIONS OF THE AIR PASSAGES.

BY JOSEPH B. POTSDAMER, A. M., M. D.
PHILADELPHIA.

Under the name of Vin. Iodinii Comp., I have had a mixture prepared by my friend Mr. Emil Jungman, apothecary at Fourth and Noble streets, each teaspoonful containing phosphorus, gr. $\frac{1}{16}$; iodine, gr. $\frac{1}{4}$; bromine, gr. $\frac{1}{4}$; with aromatics and sherry wine. This preparation is very palatable, neither of the drugs being perceptible by the sense of taste. The dose is from thirty drops to a teaspoonful three times daily. A boy of nine can very well bear twenty drops.

The first series of cases in which the remedy was used, was those of chronic bronchitis with acute exacerbations. In all the cases, without any exception, the cough disappeared rapidly. Most of these patients had been treated on previous occasions by the usual routine treatment but the difference was so marked as to at once attract the attention of the sufferers. The expectoration in these cases immediately began to diminish in quantity and to improve in appearance. Among these cases was a man, who, during the intervals of the attacks, was

perfectly free from cough but was subject to attacks of dyspepsia which was brought on by indiscretions in diet or the use of the usual remedy for his disease. The use of the vin. iodinii comp. in this case not only agreed perfectly but strengthened digestion.

In cases of hard dry cough without any material physical signs continuing for some time, the cough was arrested in short order by the prompt administration of the remedy.

Cases of nasal catarrh, particularly those with reflex cough received marked benefit from the use of this combination.

The last stage of acute bronchitis which at times is difficult to eradicate promptly, was quickly dissipated by the use of this remedy.

Lately I have been treating cases of sub-acute and chronic gastritis by this means with apparently equal success. From observations made thus far, I expect to have as good results with this class of cases as with those of the air passages.

This remedy has been used quite extensively by my friends, Drs. A. H. De Young, Geo. Roessler and F. X. O'Neill, and their experience fully corroborates mine.

1333 Franklin St., Phila., Pa.

SOCIETY REPORTS.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting, November 25th, 1891.

Dr. John B. Roberts read a paper on Clinical Contributions to Brain Surgery. (See page 5).

DISCUSSION.

DR. M. PRICE:—I should like to ask a question, and that is in regard to the propriety of removing a clot in a case where the operation has been delayed for some time, and where, after trephining, it is found that the clot has become adherent, and where the attempt at its removal is followed by free bleeding. This question presented itself in the case of a young man injured in an iron-works in Phoenixville, some two weeks ago. A small stove shovel was thrown at him, the handle striking and penetrating the skull. For the first day or two there were no symptoms of paralysis. Dr. Shoemaker was called to the case a week or so after the

accident, and at once decided on operation, at which I assisted him. There was incomplete paralysis of the right side, and there had been some slight convulsive attacks. The trephine opening overlapped the clot and the depressed fragment of bone. As I have said, the clot was adherent, and the attempt at removal caused free bleeding. We allowed it to remain, thinking that this would do less harm than the violence necessary to remove it. So far, the result shows that we acted rightly, but what the final result will be I cannot say.

Some of you may recall two murder cases which occurred in 1873. They were both cases of penetrating wounds of the skull through the eyeball, produced by umbrellas. One was a man who, after the injury, came to the Fifth Street Dispensary, where I examined him. He then went to his home in Camden, where he died in a few days. The second case was that of a drunken woman, whom I saw four hours later. She was wounded by her husband in his attempt to ward off her blows. She was removed to the Pennsylvania Hospital, where she died.

DR. T. S. K. MORTON:—I did not understand Dr. Laplace to state that any provision for drainage was made at the time of the first operation. That might possibly have warded off some of the consequences of the injury.

I should like to ask those present their views and experiences as to the results of operations for epilepsy. It has been my fortune to see a good many cases of epilepsy operated upon, not only where the malady originated in the brain, but in other ways, as from phimosis, contracted tendons, neuralgic testicle, etc., and in none of these cases, if my memory serves me right, has there been a permanent cure. In one case, where a contracted tendo Achillis was divided, the seizures remained absent for two years and then returned. It has seemed to me that possibly the profound anæsthesia has something to do with preventing the occurrence of the attacks.

I had one case which was considered traumatic epilepsy, referred to me by Dr. Mills, of a child two years of age, who had fallen, striking its head on a piece of iron. Before the accident there had been no epileptic seizures; after the injury seizures soon began, and recurred with great frequency. A thousand convulsions were counted in a short time. These involved one side of the body, apparently beginning in the centres for the thumb, finger, and

arm; extending down the right side; and subsequently becoming general. It was decided to apply a large trephine over the arm centre and see what was there. An inch and a half button was taken out. The dura was thickened, and I dissected it entirely away, leaving a margin of an eighth of an inch all around the trephine opening, so that hæmorrhage could be readily controlled. There being no apparent lesion of the brain, the oedematous pia mater was not opened. The button of bone was not replaced. The flaps were sutured, and catgut drain introduced. The drain was removed ten hours after the operation, when the dressings were found saturated with serum. The wound healed by primary union, and the child went home into the country on the tenth day. I understand that there has been no material improvement in his condition.

DR. CHARLES K. MILLS:—I can recall ten or twelve of my own cases of epilepsy in which I have had operations performed, and I have been present at fifteen or twenty other operations, so that I have a personal experience of some twenty-five or thirty cases of operation for epilepsy. I have also paid a good deal of attention to the theoretical part of the subject. I am sorry to say that the results in the majority of cases have not been permanently good, but I do not feel altogether discouraged in regard to cranial and cerebral operations for cases of this character. There are reasons why these operations have not succeeded. Some are inherent to the condition, while others are dependent upon errors of diagnosis, while still others are dependent upon the fact that the convulsive habit has been induced by the long continuance of the condition.

I have had two cases of cortical excision. One of these will be reported by Dr. Keen in the coming number of the *American Journal of the Medical Sciences*. In this case a small tumor was found in the centre of the trephine opening, which proved to be a sarcoma. A part of the cortex an inch in diameter was also removed. Although the patient improved after the operation, she is now practically no better than before the operation. It seems to me that in this case the brain and nervous system had been so influenced by the long-continued convulsions that they could not recover. The great difficulty in many of these cases is the late period at which the operation is performed. In nearly all cases of epilepsy, except those due to recent traumatism, the affection has

existed for some time. And then there are secondary changes which cannot be removed by trephining.

I think that of all cases certain classes of hæmorrhage present the greatest likelihood of benefit from operation. These are certain supra-dural and sub-dural hæmorrhages which can be pretty well localized. In the case of Dr. Price, I think that it would have been better to remove the clot as a whole, not perhaps by traction, but by a second trephine opening. In some cases these dural and sub-dural hæmorrhages do lead to permanent epilepsy, even though at first no symptoms are present.

I believe that the most brilliant results, although we have not had them yet, will be in cases of brain tumor. In this class of cases, fibromata offer more chance than other forms of growths, for usually they do not permeate the brain. Some old syphilitic tumors, and a few of other varieties, can be removed. The difficulty in these tumor cases is that they have been left too long.

DR. JAMES HENDRIE LLOYD:—The cause of the paralysis of the arm on the same side as the tumor in this case seems obscure, but I inferred from what Dr. Roberts said, he was not himself certain of the accuracy of this observation. I can hardly see how that tumor could cause hemiplegia of the same side unless it acted as a cerebellar tumor sometimes acts—by downward pressure. In some tumors of the cerebellum there is hemiplegia on the same side from pressure downward on the motor tracts below their decussation. In this case the tentorium would probably prevent such downward pressure, and I hardly see how the alleged fact could be explained in this way. The brain has not been thoroughly dissected, and there may be some other lesion, as hæmorrhage or a secondary growth, which has caused this symptom.

DR. ROBERTS:—I was much interested in Dr. Laplace's case, but I do not quite understand the condition of affairs. I understand that the temperature which had been high, had descended to about normal before the operation. I should like to know what was the character of the clot some two weeks after the accident. Was it broken down or partially organized? It seems to me that it would be difficult to get away an old clot of blood which would be ubrinous from such an irregular surface as the base of the skull. I could not help thinking that possibly the clot removed was one due to the manipulations at the base of the brain. Again, was the discharge from the wound serum from

blood-clot, or was it cerebro-spinal fluid mixed with a certain amount of inflammatory exudate? While the result has been exceedingly brilliant, I could not help thinking that perhaps if no operation had been done the patient might still have recovered. As the history, as I remember it, seemed to indicate beginning improvement, was it absolutely necessary to keep the wound open for a number of days? I can understand that drainage is necessary in recent brain injuries, but in this case the drain was used at a late period and kept up for some time. The case is one of extraordinary interest, and I simply wish to have these points brought out clearly, as I failed to grasp the points when the report was read. No unjust criticism is intended, but I wish to study the case.

It seemed curious that in my specimen of brain tumor there should be right-sided hemiplegia, but I think that there is a little question that it was on the right side. I inquired in regard to the eyesight, and as far as known there was no blindness or deafness. Very few symptoms were noted, as the patient was in a public institution and made no complaint until a few days before her death. I would have been interested to hear in regard to the probability of the paralysis being due to pressure upon the longitudinal sinus damming back the blood and making secondary pressure, as it were, on the opposite side.

DR. LAPLACE:—I would state in reply to Dr. Morton's question, that at the first dressing I put in an iodoform drain, which remained in until the time of the operation. In regard to the points suggested by Dr. Roberts, I would say that I was well aware that on the thirteenth day the clot would not be in the condition that it was on the second day. I knew that it would be fibrinous, and in order to entangle it I devised the little instrument shown.

A few hours after the accident the temperature rose to 104°, and then for the next ten or twelve days varied between 100° and 103°. The coma then began to increase. Because the temperature before the operation was low, it did not follow that the patient was getting well. The patient was really worse. He was more comatose and he could not swallow. He had to be nourished by the bowel. Something had to be done, or he would die. I relieved the intracranial tension and provided for drainage. There must be drainage in cerebral surgery on account of the unyielding nature of the cranial wall.

SELECTED FORMULÆ.

FOR LUMBO-ABDOMINAL NEURALGIA.

The following ointment is highly recommended for this affection :

R	Salicylic acid.....	grammes x.
	Pulverized camphor.....	" vj.
	Vaselin.....	xiv.

M. Sig. To be rubbed frequently.

—*Il. Raccoglitore Médico*, November 20, 1891.

MIXTURE FOR SCIATICA.

The following mixture has been employed with success in the treatment of sciatica :

R	Fluid extract of belladonna.....	grammes 1.83.
	" " aconite.....	5.60.
	" " gelsemium.....	25.00.

M. Sig. 6 to 8 drops every four hours for adults.

—*Il. Raccoglitore Médico*, November 20, 1891.

IN OBSTINATE VOMITING.

In the obstinate vomiting of certain dyspepsias, H. Guimbail recommends washing of the stomach with either of the following solutions :

1.		
R	Bicarbonate of sodium.....	grammes iv.
	Water.....	" M.
2.		
R	Naphthol.....	grammes 0.25.
	Water.....	" M.

—*Journal de Médecine de Paris*, November 22, 1891.

FOR CHAPPED NIPPLES.

In the treatment of chapped nipples Vinay has employed successfully the following formula :

R	Aristol.....	grammes iv.
	Liquid vaselin.....	" xx.

M. Sig. To be locally applied.

—*Le Bulletin Médical*, November 25, 1891.

INHALATION FOR WHOOPING-COUGH.

Beall recommends, as inhalation for the treatment of whooping-cough, the following mixture :

R	Thymol.....	grammes 1.20.
	Phenic acid.....	" 15.00.
	Essence of sassafras.....	
	Essence of eucalyptus.....	
	Essence of turpentine.....	
	Liquid tar, aa.....	7.50.
	Ether.....	4.00.
	Alcohol, q. s. for.....	90.00.

M. Sig. About 30 drops of this mixture are placed on a handkerchief, and the child made to inhale it. This application is to be repeated every two or three hours.

—*La Médecine Moderne*, November 20, 1891.

NASAL DOUCHES.

In the ulcerated condition of the mucous membrane, occurring in the tertiary form of syphilis, the following formula is highly recommended by Ricardo Botey, to be applied in the form of douches :

R	Pure chloride of sodium.....	grammes cxx.
	Crystallized phenic acid.....	" vj.
	Thymol.....	gramme j.

M., and make twelve powders. Sig. A powder to be placed in two large glasses of luke-warm water, and the solution applied as indicated.

—*Archives Internationales de Laringologie, Otologie y Rinologie*, December, 1891.

FOR CHRONIC PHARYNGITIS.

In this affection the following can be advantageously used :

R	Ergotine.....	gr. xv.
	Tincture of iodine.....	5 j.
	Glycerin.....	5 j.

M. Sig. To be applied three times a day by means of a brush.

—*L'Union Médicale du Canada*, December, 1891.

FOR ASTHMA.

The following mixture, to be inhaled during an asthmatic attack, is of value :

R	Ether.....	5 j.
	Essence of turpentine.....	5 iv.
	Benzoic acid.....	5 iv.
	Balsam of tolu.....	5 ij.

M. Sig. Applied as indicated.

—*L'Union Médicale du Canada*, December, 1891.

FOR CHRONIC GOUT.

For the local treatment of this rebellious malady, the following formula is recommended as being of great utility :

R	Etheral tinct. of capsicum.....	5 j.
	Spirits of ammonia.....	5 j.
	Essence of turpentine.....	5 j.
	Linseed oil, aa.....	5 j.

M. Sig. To be applied by rubbing.

It is also said to be of value in articular and chronic muscular rheumatism, and even in chronic bronchitis.

GASTRO-INTESTINAL ATONY.

Dr. Germain Sée (*Il Raccoglitore Médico*, No. 14, 1891), in gastro-intestinal atony with tympanites, uses the following :

R	Magnésie usée } aa.....	grammes xv.
	Cretæ preparat. }	gramme j.
	Colombo pulcrizat.....	o.6.
	Pulv. vanillæ.....	" o.6.

A half teaspoonful before each meal.

Nux vomica tincture may be given in some cases instead of the above, with a saline purgative.

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LEADING ARTICLE.

THE NECESSITY FOR THE MORE GENERAL USE OF ABDOMINAL PALPATION AND PELVIMETRY IN OBSTETRICAL PRACTICE.

The conduct of labor in this country is empirical rather than scientific. This fact does not reflect so much upon the practitioners as upon the teachers of obstetrics. It has been a popular opinion that American women are so well formed, so vigorous, and healthy that labor with us is physiological, purely, and that much knowledge and certain rules of practice which are of value to the European practitioners are superfluous in our more favored country. This old, popular, soothing theory has been the cause of much lack of knowledge and careless rules of practice in this country, and indirectly has caused many deaths and has heaped dishonor upon our profession.

The fact is we have no such inhabitants as this theory assumes. Especially in our large centres people of foreign birth, or the children of foreigners abound; and our own women are far from physical perfection. Pelvic deformities are common, and are by no means confined to the foreign population.

Under the old rule of practice the practitioner made no special study of an individual pregnancy. He assumed, as he was taught, that all would terminate happily, "because labor is a physiological process." No reflections concerning the relation of the passenger to the passage disturbed his mind; when called to the labor, still no special study of the case was made. Even an arrest of the head at the superior strait did not give rise to questions other than dynamic. Tedious labor he ascribed only to rigidity of the soft parts, or to an unfavorable presentation, or to inertia. Labor not progressing, forceps were applied and traction made, often great and sustained traction. This failing, perhaps a friend was called who repeated the process with a like result. Not until this time was it considered necessary to study the pelvis, and but too often the practitioner was ignorant of the

methods of mensuration to be employed. The results of this method of practice in cases of pelvic deformity are but too well known to us. Perhaps a dead or spoiled baby was delivered after the greatest effort, the process inflicting bruises and lacerations on the exhausted mother. Or at the last, delivery was effected by embryotomy. Cæsarean section was rendered too dangerous to be employed except under absolute indications, the mother being exhausted as a rule before this was considered. And only too often septic infection and death of the mother as well as the child closed the scene.

Fortunately for our women and for the good name of American medicine a new era has dawned. Students at the present time are taught the anatomy of the deformed as well as of the normal pelvis, and the mechanism of labor peculiar to the several varieties of deformity of the pelvis. Abdominal palpation and pelvimetry also are taught, and the rule of practice laid down is, that all primiparæ should be carefully studied at least six weeks before term, so that any abnormality in the pelvis, or in the presentation of the fœtus may be known. And the same is true of multiparæ who have had difficult labor.

This rule of practice places the medical attendant on an entirely different footing. Each case of pregnancy and labor is one for scientific study. If but slight deformity is found, nature can be trusted to overcome the difficulty with perhaps minor assistance; if the deformity be considerable, labor can be induced at the thirty-fourth to the thirty-sixth week; or if the deformity be great, Cæsarean section can be determined upon and done at term as a formal operation with all the care usual to abdominal sections. On the other hand, if the pelvis is normal, as is the rule, practitioner and patient are reassured, since the only difficulties likely to be encountered are dynamic.

If only all practitioners would follow this beneficent rule American practice and results in the management of cases of labor in deformed pelvis would cease to be a reproach. Especially could the percentage of cranio-

tomies be decreased by timely resort to the induction of labor, or to the Cæsarean section, in proper cases, before the patient's chances for recovery are jeopardized by attempts at delivery by forceps or version.

The outlay of time in examining a patient by abdominal palpation and external pelvimetry is inconsiderable, and this is sufficient to separate the normal from the abnormal cases. Thus it is seldom necessary to make a vaginal examination. The benefit derived by the practitioner himself, more especially from the palpation, is inestimable. There is no better way of cultivating the *tactus eruditus*, so valuable to us all. Experience makes the results of external palpation quite exact, so that in the diagnosis of the presentation and position of the fœtus it becomes more valuable than the internal examination.

In time, undoubtedly, this practice will become general, but that day will be hastened, women in travail more surely relieved, and the good name of our profession conserved if every one who has followed the old system will familiarize himself with the principles of obstetrical abdominal palpation and pelvimetry, and apply them in his daily work.

OBITUARY.

E. B. P. KELLEY, M. D.

Dr. Edw. Bentley Perley Kelley was born at Campbellstown, Lebanon Co., Pa., 52 years ago. His early education was received at Strausburg Academy, and his medical diploma from Jefferson Medical College, at Philadelphia. After his graduation he was for a time connected with one of the Hospitals in the city of Philadelphia. Immediately upon the breaking out of the civil war he entered the Union Army as a surgeon, and was soon promoted to the rank of Brev. Lieut. Colonel, U. S. Volunteers; and later Colonel, and was Surgeon-in-chief, 1st Div., 1st corps, Medical Division, 6th Army Corps.

He was present at 52 battles and at the surrender of Gen. Lee, and was finally discharged in August, 1865. What a splendid

record of service to his country; no greater encomium could be needed. After leaving the army, he came to Perrenville, N. J. and entered into partnership with the late Dr. T. J. Thomason, and here he remained about 9 years. On the 15th October, 1873 he married Miss Frances Bulkley, of Cranbury, N. J., and July 24, 1874, settled at Perth Amboy, N. J., where he soon built up a large and lucrative practice. He died at his home, November 25, of cerebral hæmorrhage, after only a few hours illness, and never regained consciousness from the beginning of the attack.

Dr. Kelley was an excellent surgeon and a very skilful physician—two qualifications very rarely combined.

He was a kind husband and an indulgent father; a man of fine presence and a high-toned honorable gentleman.

He was the trusted advisor of hundreds of families, and by his many acts of genuine charity endeared himself to an unusually large circle of true friends.

He was a rigid observer of true medical ethics, and although he considered his first duty was toward his patient, no physician ever disliked to meet him in consultation.

He was a member of the Grand Army of the Republic, and was never absent from a reunion of the Army of the Potomac from the time of its organization.

He leaves a widow, one daughter and a brother to mourn his loss.

He was laid to rest in the cemetery of the Second Presbyterian church, at Cranbury, N. J., on Saturday, November 28th, 1891.

A delegation of Odd Fellows, Knights of Pythias and his G. A. R. Post were present.

J. C. HOLMES, M. D.

CORRESPONDENCE.

DR. MASSEY'S CASE REPORTED AT THE MEETING OF THE PHILADELPHIA COUNTY MEDICAL SOCIETY, DECEMBER 12TH.

EDITOR MEDICAL AND SURGICAL REPORTER:—I was unfortunately not present at the last meeting of the Philadelphia County Medical Society, the proceedings of which appeared in the REPORTER of December 12th, but beg your permission to comment briefly on the final paragraph of Dr. Price's remarks in closing the discussion on his paper, as they appear on page 940.

It is not always possible to intelligently respond to the discussion on a paper that has taken a wide range, yet I know of few instances where the responder was so wide of the mark as when Dr. Price responded to Dr. Woodbury. The case referred to by Dr. Woodbury was treated by me by the intra-uterine or Apostoli method after a non-electrical exploratory puncture, and this was distinctly stated by him. In view of the brilliant result gained from this harmless treatment it is incomprehensible how the case can be regarded as a "proof of the value of operative treatment", or why we should be congratulated on not having a death instead of benefit, unless, as was doubtless true, the tenor of Dr. Woodbury's statement has been misunderstood. The evidence of Dr. Woodbury's case was strongly in favor of the electrical treatment of fibroid tumors, and as the readers of the REPORTER can see the proof, in the shape of a well woman, any day, I should hate to have them think otherwise about it.

Yours truly,

G. BETTON MASSEY.

THE TYPEWRITER MATTER.

TO THE EDITOR OF THE MEDICAL AND SURGICAL REPORTER:—Having a considerable acquaintance with typewriters, and having done all my own work on the instrument for the last three years, I am inclined to think that Dr. Sherman is wrong about the machine being the cause of injury to the eyes, although I fully agree with him that stenographic writing is bad for weak visual organs. Several articles written by myself as to the value of the instrument in such maladies as writer's cramp, incipient paralysis, etc., were based on the ideas had from those who suffered from such troubles, and who were able to do their work with the machine, but not with the pen, and I might extend these remarks by showing, (if space permitted), that in precisely such disorders as eye-strain, the typewriter is a most valuable adjunct in securing a cure.

Now, it is not at all necessary to look at the keys when writing, and experts do not do so as a rule; the action of the fingers is almost automatic, as it is in playing the piano or organ. I seldom look at the keys of an organ when playing, the music taking the attention so far as seeing is concerned, in case the piece is played from notes. To try this fully, although I usually do not look at the keys of my machine except casually, I have written this without looking at them at

all, hence one or two slight errors may exist. Although not feeling in good shape for writing anything, I have done this at the best speed possible, as a matter of experiment, and not being an expert, it will be seen that the work can be done so as to save the eyes by one who cares to learn a little, instead of injuring them. In speaking of the apparatus I refer, of course, to reputable machines, not the small playthings which require constant inspection whilst writing with them, (or trying to do so.) Anyone who uses a "Remington", will find his eyes protected equally with his finger muscles, to say nothing of the time saved to himself in writing, and to his reader in deciphering what he wants to say.

The above contains about three hundred and fifty words, and was written in eighteen minutes, allowing a few seconds to run the ribbon back. The fact that one occasionally looks at what has been written does not militate against the machine, for we must do so when the pen is used, or the pencil; moreover, we actually follow the pen with the eye all the time we are writing. Maybe the doctor can find something wrong about the stomach or the eyes not due to the hard work he does with his typewriter.

W. R. D. BLACKWOOD, M. D.,
Philadelphia.

BOOK REVIEWS.

SANDERS' QUESTION COMPENDS, NO. 21. ESSENTIALS OF NERVOUS DISEASES AND INSANITY: THEIR SYMPTOMS AND TREATMENT. A MANUAL FOR STUDENTS AND PRACTITIONERS. BY JOHN C. SHAW, M. D., Clinical Professor of Diseases of the Mind and Nervous System, Long Island College Hospital Medical School; Consulting Neurologist to the St. Catherine's Hospital, and Long Island College Hospital; formerly Medical Supt. of the Kings County Insane Asylum.

This brief synopsis of nervous and mental diseases contains much to commend it to the student and busy practitioner of medicine. Its arrangement is simple and consistent with the modern views of the pathology of the affections treated of, as far as possible. The author has wisely recognized the true scope of his work, and has not marred its real value as a synopsis by departing too far from the general outline of his subject. Each disease is regularly dealt with regarding definitions, etiology, symptoms, diagnosis, prognosis, and treatment. The forty-eight original illustrations, selected chiefly

from the author's private practice, are well executed and add value to the work.

The portion devoted to Insanity is of particular interest to the student. Since it presents in a few words much valuable information regarding what is to most students a very obscure subject.

Necessarily only parts of some subjects could be presented, and indeed one is rather amazed to find nearly all the diseases of the nervous system and mind treated in one little book of 190 pages.

One feature seems misleading and inappropriate in a book of this kind. We refer to the incomplete bibliography which is attached to the description of various nervous diseases. The bibliography of hereditary chorea is an instance of this, and this feature of the book is a literary blunder. With this exception we heartily recommend this little volume to the student and the profession generally as a concise, readable and faithful synopsis of diseases of the mind and nervous system.

PERISCOPE.

THERAPEUTICS.

RESORCIN IN LARYNGEAL PHTHISIS.

Dr. Tymowsky publishes in the *Monatsschrift für Ohrenheilkunde* a contribution to the treatment of laryngeal phthisis. He considers that when the hygienic surroundings of the patients are favorable, rest and liquid nourishment are sufficient to allow simple erosions and even superficial ulcers to heal. When the latter are of greater depth, and the surrounding tissue is infiltrated, cocaine and alkaline inhalations must be administered; and when the inflammation has been reached by this treatment, lactic acid in a solution of the strength of from 50 to 80 per cent., or an 80 per cent. solution of resorcin, may be applied successfully. Iodoform, to be useful, must be applied twice a day, and only when the ulcers are covered with abundant granulations. Dr. Tymowsky calls resorcin the most convenient of all these remedies, because it gives no pain, and need only be applied once a day. The solution must, however, be of the strength of 100 per cent. for unhealthy-looking ulcers which are undoubtedly of tuberculous character, when its effect may be depended on. At the same time inhalations of from 2 to 5 per cent.

solution of resorcin may be substituted for those of cocaine. Resorcin consequently is antipyretic, antiseptic, and hæmostatic, and may be given internally in quantities of three or four grammes a day. It is also used externally in various forms. Dr. Unna has administered it for a long time past in chronic recurrent ulcerations of the skin.

PHENOCOLL HYDROCHLORIDE IN MALARIA.

Prof. Albertoni, of Bologna, makes a very important communication, relating to the use of phenocoll hydrochloride in malaria. Prof. Albertoni states that he has carefully and extensively employed the remedy in his practice, and that the most excellent results ("I risultati sono bellissimi") were effected in a number of severe malarial cases. A comprehensive and highly eulogistic report has been prepared and will be published in an early issue of the "Accademia Medica." This is highly valuable information; quinine has heretofore been almost the only available remedy for malaria, and even this occasionally disappoints. Phenocoll is already favorably known as a superior antipyretic and is also employed with success in the treatment of rheumatism.

THE SUBCUTANEOUS INJECTION OF ATROPIA AS A HEMOSTATIC.

M. Bierwirth (*Journal de Medecine de Paris*, October 25th, 1891) has obtained from the subcutaneous administration of from 3 to 6 deci-milligrammes [$\frac{1}{10}$ to $\frac{1}{20}$ grain] of atropia a prompt hæmostatic action in several cases of hæmorrhage, epistaxis and hæmatemesis, which ergotin and other unusual remedies had failed to control. The hæmorrhage was always arrested in about ten minutes. In one patient the injection had to be repeated three times; but in all the others one single injection sufficed to permanently arrest the loss of blood. Dr. Hausmann, of Méran, has also successfully resorted to the injection of atropine in hæmoptysis. Afterward, another German physician, Dr. Tacke, of Wesel, found atropia, hypodermically administered, an excellent method for the arrest of excessive menstrual loss.

The hæmostatic action of atropine is explained on the ground of an action directly the opposite of that pertaining to ergotin. While the latter agent causes contraction of the capillaries, atropia causes their dilatation by paralyzing the vaso-constrictor

nerves, as has been demonstrated by Graham Brown. By increasing the quality of blood in the general capillary circulation, atropine diminishes the afflux toward the point of hæmorrhage, favors coagulation and arrest the hæmorrhage.

TUBERCULIN IN THE TREATMENT OF LUPUS.

Eichhoff (*Therap. Monatsh.*, Sept., 1891) relates his experiences extending over six months. Of twenty cases of lupus only one, occurring in a lad, aged 15, was completely cured, there being no relapse in six months' time, when the patient was last seen. In a second case of lupus acneiformis of the face in which the tubercle bacillus was found, a fresh set of lupus nodules appeared during the treatment. When, however, local treatment was combined with the use of tuberculin, the further development of these nodules was very slight, and the patient was discharged in five months' time with nearly all of them healed. Eichhoff would explain this by the reaction being insufficient to make a way through the skin, and thus time and opportunity were given for the absorption of the bacilli. This is the danger in the treatment, and consequently the lymph should be used in conjunction with local treatment. Of six cases thus treated two relapsed, and of four others treated with tuberculin alone three relapsed; of the remaining ten, part were discharged better and part were still under treatment. A case of prurigo and another of tuberculous eczema (Unna) were cured by the lymph. The lymph did not harm the patient in any case, and Eichhoff believes it to be a specific for lupus (tuberculous) processes, and that it does not act favorably on fresh tubercle. He says it is neither right to discard the remedy nor yet to look upon it as harmless, or as acting without fail.—*Brit. Med. Jour.*

LAVAGE IN VOMITING FOLLOWING CHLOROFORM.

Dr. Lienevitch (*Rev. Ther. Med. Chir.*) proposes to relieve the vomiting which follows the administration of chloroform, by lavage. He believes that not only the chloroform, but as well the irritation of the peritoneum produced by the antiseptics, is accountable for this symptom. He employs the tube of Faucher and washes out the stomach with warm water in which $\frac{1}{4}$ to 1 per cent. of bicarbonate of soda has been dissolved, until the water returns clear. The

abdominal walls are compressed (after an operation of laparotomy has been performed) during the washing. The results are excellent, in that, if necessary, water sufficient for the needs of the patient can be left in the stomach. The general condition improves, because there is freedom from nausea, gaseous accumulations, vertigo, and epigastric distress.

SULPHAMINOL, OR THIO-OXYPHENYL-DIAMIN: A DISINFECTANT.

Dr. Wojtaszek communicates to the *Przegląd Lekarski* some observations he has made on sulphaminol, which has been brought out by an eminent German firm as a new disinfectant, which is said to split up with the body into carbolic acid and some compounds of sulphur. So far from this being the case, however, Dr. Wojtaszek found that large doses might be given to animals, both hypodermically and by the mouth, without producing any effect whatever; also that when applied as a dressing to cancers, soft chancres, and other open sores, it exercised no disinfectant action. He has therefore come to the conclusion that for therapeutic purposes it is inert.

TREATMENT OF BUBOES.

Dr. S. Cordier (*Ugeskrift for Læger*, Nos. 4-5, 1891) punctures buboes as early as possible, injects a strong nitrate of silver solution into the cavity, and covers the place of puncture over with iodoform. Healing soon follows. Sometimes the puncture must be repeated.

TREATMENT OF INJURIES TO THE HEAD.

Dr. Senger, of Crefeld has proposed a new method of treatment with the object of facilitating repair in suppurating wounds of the head, with exposure of the cranium. He first arrests the phlegmonous and puriform process by surgical and antiseptic treatment—that is, by incisions, drainage, and dressing,—and so reduces the complicated injury to a simple cranial wound, which of course still produces a certain quantity of pus every twenty-four hours. A wet antiseptic dressing is then applied to the wound for two or three days, and when this is taken off the first layer of the tabula externa is removed with the help of a small chisel, in little scales, until drops of blood are seen in the bone. In

from two to three days granulations protrude from the bone, and entirely cover it in from eight to ten days, and healing subsequently progresses as in other wounds. Suppuration ceases in proportion to the growth of the granulations. It is also possible to produce granulations by drilling several small holes in the external table until blood is seen; but the chisel is preferable, as it is difficult to estimate the depth of the drillhole, and the drilling takes more time than the chiselling. A still more serious objection to the former is that the holes get filled up with bone dust. In neither method is it necessary to give an anæsthetic, as but little pain is felt during the trifling operation.—*Lancet*.

OXYGEN INHALATION.

Neumann (*Therap. Monatsh.*, October, 1891) says that experiments up to now have been concerned with the inhalation of (1) as pure oxygen as possible with no increase of pressure, (2) a mixture of oxygen (63 per cent.) and nitrogen under ordinary pressures and (3) air with high percentage of oxygen and with increased pressure, and the authors communications refer to this. The following conditions must be present: (1) the production of the gas must take place in a manner which can be observed and regulated, (2) the amount of gas must allow itself to be approximately calculated with each respiration, (3) it must not irritate, and therefore (4) it must be mixed with air, and (5) it must be inspired under a moderately increased pressure. The author then describes his apparatus. Patients soon learn how to use it. The pulse, at first quickened, is ultimately slowed. No unpleasant head symptoms arise. There is no palpitation; in fact, the heart's action is regulated. Sleep is often induced, even in men. In many patients the night's rest has been improved, the breathing has been rendered easier, and there has been a general feeling of increased strength. In three cases treated at the same time by Koch's method, the fever disappeared in two, and was lessened in the third. The author thinks the action of certain drugs as of iron in chlorosis, may be increased by oxygen inhalation. He has treated very severe cases of anæmia, a case of convalescence from pleurisy, cases of phthisis, and a case of sepsis and of diabetes, with good results, and he appends a few notes on them. Neumann thinks it may be of service in gout, as it diminishes the amount of uric acid in the urine.—*Brit. Med. Jour.*

ANTIPYRIN IN AFFECTIONS OF THE PHARYNX AND LARYNX.

M. E. Saint-Hilaire (*Archives de Laryngologie*, September, 1891) refers to a recent paper by himself and M. Coupard, in which they described the therapeutic value of antipyrin, applied locally, in certain throat affections. By its means they were able to cure a variety of complaints dependent on undue sensibility of the pharynx and larynx, such as spasmodic cough, sensations of pricking in the throat, or of a foreign body, etc. These results seemed due to a local anæsthetic effect of antipyrin, and M. Saint-Hilaire has performed numerous experiments with the view of determining the anæsthetic properties of antipyrin. He draws the following conclusions from these experiments: 1. The anæsthesia produced by cocaine is complete, and applies to tactile sensation and to sensations of heat and cold. 2. The anæsthesia lasts from one to two hours. 3. In order to produce this effect the strength should be not less than 30 per cent. The solution employed by M. Saint-Hilaire is of a strength of 40 per cent. He thinks that antipyrin will be found especially useful in cases where a prolonged analgesia is desired; thus, in tuberculous ulceration, the pain may be kept under by painting the parts with the antipyrin solution two or three times a day. It will be found useful in those affections where either the reflex element or the painful element predominates. Moreover, antipyrin possesses an antiseptic property which will render it additionally useful in certain cases. Of course, when for the purpose of operation an anæsthesia of short duration is required, cocaine is preferable, as the effect is more rapidly produced, and is more complete while it lasts.—*Brit. Med. Jour.*

ON THE THERAPEUTIC VALUE OF NERVE-STRETCHING.

Dr. Archimede Mischi comes to the following conclusions:

1. Nerve-stretching constitutes, by its manner of action, a special therapeutic process. This influence is felt even as far as the nervous centres and in the medulla oblongata in particular. A paralysis of sensation, with relative conservation of motility, is produced.

2. Nerve-stretching is an efficacious method of treatment in those cases in which the lesion is peripheric; hence, it is useful in the treatment of the various neuralgias, tic-

dououreux, spasms, traumatic contractures and reflex epilepsy.

3. It must be condemned in tabes dorsalis and various affections of the medulla oblongata, in which it is never successful, often injurious and, finally, sometimes fatal.

4. It offers but the slightest probability of success in the treatment of tetanus.—*Il Raccoglitore Medico*, Dec. 10, 1890.

CRESOL SOLUTIONS.

The question of securing a neutral solution of the cresols has been the subject of recent investigation, the custom of emulsifying them by means of soap or alkalis, being open to many objections. It has been ascertained (*Chem. Zeit.*) that the addition of cresol to a very concentrated aqueous solution of sodium salicylate, produces a mixture which may be diluted with water without fear of the cresol separating on standing. This process does not result in the formation of any double salt. The ortho-meta or para-cresol may be used, and the sodium salicylate may be replaced by salicylates of other bases or by the salts of ortho-oxybenzol carboxylic acid, or of the phenols and naphthols, the latter possessing the solvent property in a greater degree than the former. Experiments demonstrate the superiority of solutions effected by means of sodium cresotate. A $\frac{1}{2}$ of 1 per cent. solution is said to be equally as efficacious for bactericidal purposes, as a 5 per cent. solution of carbolic acid, and to be free from its caustic and irritant effects.

MEDICINE.

OXALURIA AND HÆMATURIA.

Dr. Francis D. Boyd writes in the *Lancet* that very little is known of the clinical significance of the excretion of oxalate of lime in the urine in the condition described as oxaluria. Numerous cases of so-called cyclical albuminuria, accompanied by oxaluria, have been described, in which by some authors the albumen was ascribed to irritation of the kidneys by the crystals of oxalate of lime. That some of the albumen in those conditions is derived from the urinary tract is highly probable, but the following case seems to support the view that the excretion of crystals of oxalate of lime does irritate the kidneys in some cases.

Mrs. M—, a young woman of a very rheumatic history, was taken ill during the night of July 20th with severe pain in the

lumbar region. She likewise had headache and felt very feverish. Next morning the pain was easier, though the headache was still present, and she noticed that her urine had become of a bright red color. There was no pain on micturition. He saw her on the following day; she was then complaining of headache. Pain in back still present; no œdema. First sound of heart loud and accentuated. Pulse 100, full, and of rather high tension. Urine faintly acid, containing blood in large quantities and albumen. Under the microscope the deposit was seen to be composed of blood-corpuscles, crystals of oxalate of lime, and numerous tube casts containing epithelial and blood cells, oxalate as well as crystals. On inquiry he found that for three days before the attack the patient had been partaking largely of rhubarb, which she said she knew never suited her. She was directed to take nothing but milk, to rest in bed, to keep the bowels freely open with Friedrichshall water, and nitro-hydrochloric acid was prescribed. On the following day there was marked improvement. The pain in the back was gone, the blood and casts were decidedly diminished, and urine was passed in larger quantity than formerly. The oxalates were still present. By July 26th the blood, albumen, and casts had entirely disappeared, and the patient was feeling quite well.

In the *Monthly Journal* for August, 1849, Begbie describes certain cases of what he terms the oxaluric diathesis, but in none of his cases, though there was pain in the back, does there seem to have been kidney irritation produced. The passage of the oxalates in the case above quoted differ from his, in that the oxalic acid seems to have been absorbed directly from the stomach, and not to have been produced during the process of digestion and assimilation. That there was in this case a true nephritis he thinks there can be no doubt from the presence of the casts, and the oxalate of lime crystals seem to be the cause, and not a mere concomitant.

PRIMARY SPLENOMEGALY.

M. Bruhl (*Archiv. Gén. de Méd.*, June, 1891) describes the disease first called splenomegaly by Professor Debove, and characterized by (1) hypertrophy of the spleen; (2) progressive anæmia without leukæmia; and (3) absence of glandular enlargement. It may begin with general symptoms of anæmia, with pallor, fatigue on the least exertion, and debility not unlike Addison's disease. More rarely it com-

mences with pain in the left hypochondrium, nausea, vomiting, and even obstinate diarrhoea. These attacks of pain, except for the locality, resemble hepatic colic. They are due to a perisplenitis. The spleen is enlarged, somewhat tender, and the surface slightly irregular. Frequently there is a pleurisy of the left base. But even in the second group of cases, a history of previous weakness, loss of color or epistaxis can generally be made out. When the disease is fully developed the anæmia is not essentially different from other forms of anæmia. Examination of the blood reveals nothing that is pathognomonic. The red cells are much diminished in numbers, and the amount of hæmoglobin may be reduced to one-half. In most cases the number of white cells is not increased. No micro-organisms have been found. The enlargement of the spleen is progressive, uniform, and considerable. Sometimes the liver is enlarged. There may even be an interstitial hepatitis. Digestive troubles and constipation are usually present. Hæmorrhages do not often occur. Epistaxis is the most common, and, in the advanced disease, petechiæ may be present, especially on the legs. The observations on the urine are few and discordant. The glands are not enlarged, except on occasional slight hypertrophy of the mesenteric and retro-peritoneal glands. In the last stage of the disease cachexia is present; the appetite is lost; there may be diarrhoea and hæmorrhages; fever is exceptional. As to the course of the disease, it lasts from six months to two years, advancing steadily to a fatal end. Sometimes, however, it progresses by fits and starts, and rarely there may be an amelioration or even a quasi-recovery. M. Bruhl says that surgical interference (splenectomy) has brought about a complete cure. The complications are pneumonia, perisplenic abscess, and perforation of an ulcer of the stomach or intestine. Splenomegaly must be distinguished from leukæmia, from tumors of the spleen, from amyloid disease, and from the enlarged spleen accompanying cirrhosis of the liver. In the grave forms of anæmia the spleen is rarely much enlarged.—*Brit. Med. Jour.*

SYPHILITIC DISEASE OF THE LUNGS.

Dr. Haslund distinguishes two forms of pulmonary syphilitic disease: 1. The diffuse form—an increase of the interstitial connective tissue. The affection always begins at the root of the lung and extends thence 2. The gummatous form—one or many gum

mata scattered through the lung, except the apex, which is rarely affected. Both forms often coexist. The course of the disease is sometimes very rapid, death occurring in from two to six months. In other cases the disease causes no symptoms, and the presence of pulmonary disease may be discovered only at the autopsy. In the early stages there are no physical signs; later on, in some cases, dulness on percussion over the root of the lung is noticed, and inspiration becomes rough and sharp. Toward the end respiration acquires a cavernous character. Syphilitic lung disease is difficult to diagnose during life. The distinction from phthisis is difficult. The diagnostic points on which Professor Haslund relies are: 1. Absence of tubercle bacilli. 2. Location; the apex is rarely affected in syphilis, almost always in tuberculosis. 3. The downward progress of the case is much more rapid in syphilis without appropriate treatment than in phthisis. 4. Absence of fever in the earlier part of the disease. 5. History of syphilis. 6. Results of antisyphilitic treatment. The prognosis is good if suitable treatment (mercury and iodide of potassium) be adopted in time. The disease is rare. Professor Haslund has, however, diagnosed and successfully treated several cases.

THE BACILLUS OF ENTERIC FEVER.

In the *Centralblatt f. klin. Medicin*, September, 1891, Dr. Lehmann, when speaking of the recent contributions by Dr. Babes and M. Cassedebat to this subject, says that comparatively a short time ago a fairly sure recognition of the typhoid bacillus, even outside the body, seemed a task easily to be performed by the help of the culture on the potato, but that now it must be looked upon as very difficult, if not impossible. When this difficulty was recognized, other distinctive signs were sought for, as, for instance, the negative indol reaction, the growth on colored media, or upon potato gelatin, but none of them are really characteristic. M. Cassedebat (*Ann. de l'Institut Pasteur*, 1890, No. 10) found three kinds of bacilli resembling that of enteric fever in the Marseilles drinking water. He thought he could distinguish them by the color of the inoculation into gelatine, by the behavior of old bouillon cultures, and by the growth in colored media. Dr. Babes (*Zeitschrift für Hygiene*, Band ix, Heft 2), on the other hand, would seem to be no longer in a position definitely to separate the nineteen varieties he obtained from the bodies of individuals dead

of enteric fever, since he adds that in several of the varieties the tendency to lose many of their characteristics has been observed.—*Brit. Med. Jour.*

SPINAL SYMPTOMS OF GONORRHOEAL ORIGIN.

Drs. Spillman and Haushalter (*Revue de Médecine*, August, 1891) reports two cases in which spinal symptoms were associated with gonorrhoea. In each case the sequence of events was (1) pregnancy, (2) vaginitis contracted in the later months, (3) pains and swelling of joints, especially of the knee, (4) normal labor, (5) the onset of nervous symptoms. These were violent lancinating pains in the extremities, tingling of the feet, great muscular atrophy; the sphincters were not, however, affected, neither was the sensibility to pricking, touch, or heat impaired; the reflexes also remained intact. A bed sore formed rapidly on the sacral region. Under treatment, however, all these alarming symptoms disappeared, and even the atrophy of the muscles was almost entirely removed by a course of massage, etc. The authors are inclined to think that the knee swelling was secondary to spinal lesions.—*Brit. Med. Jour.*

SCLERODERMA.

From clinical observations in three cases and a post-mortem study of one, Dinkler, (*Deutsches Archiv für klin. Med.*, Bd. xlvii., H. 5 u. 6) maintains that scleroderma is a disease *sui generis*, characterized at the outset by firm swelling and at a late stage by cicatricial-like atrophy of the cutis. The swelling is frequently preceded by vasomotor disturbances. Pigmentation and desquamation may take place, but are not distinctive. Scleroderma may be diffused or circumscribed. The disease process is not restricted to the skin; it may appear in the brain and in striated muscular tissue. The etiology of the disease is obscure; the affection may appear spontaneously or it may follow acute or chronic injuries. It is anatomically characterized by hyperplasia of the connective tissue and by vascular changes. The disease of the vessels involves only individual arterial branches and corresponds to periarteritis, mesarteritis and endarteritis. Clinical observation and anatomical investigation render it probable that the disease is dependent upon an inflammatory process especially involving a varying arterial distribution. The prognosis is dubious. Treat-

ment must be constitutional, conjoined with the application of the constant current and warm baths.

SURGERY.

NEW OPERATIONS ON THE PROSTATE AND BLADDER.

Küster read a paper on this subject before the Deutschen Gesellschaft für Chirurgie, 1891, which is abstracted in the *Centralblatt für Chirurgie*, 1891, No. 26. After referring to Kümmel's method of operating by suprapubic cystotomy for enlargement of the prostate, he states that the researches of Von Dittel have shown that the obstruction to the flow of urine comes more often from the lateral lobes than the median, and that these can be better reached from the perineum than from above the pubis. Küster has operated three times, making his incision in the median line of the perineum and then transversely around the left side of the anus. There is great liability of wounding the urethra, and this occurred in two of his cases. It can, however, by care be avoided. In one case a fistula remained which has not yet closed. All three patients can void their urine in a stream and are very much improved. The permanency of the benefit cannot be determined, as the time which has elapsed since the operations is only from two to ten months. He also performed a total extirpation of the prostate and bladder in a man, aged 53 years, affected with carcinoma of the prostate with papillary degeneration. The patient was placed upon Trendelenburg's support and the bladder exposed above the symphysis. The upper edge of the pelvis was chiselled away, as advised by Helferich, and the bladder was opened to confirm the diagnosis, the cut being again sewn shut. With a blunt instrument the bladder was freed from the surrounding parts and an opening into peritoneal cavity closed with sutures. A median incision was made in the perineum and the urethra divided and the prostate separated with blunt instruments and scissors. In order to find the ureters more surely, the bladder was again opened. After they were exposed they were loosely tied and cut obliquely upward and backward. A few strokes of the scissors then freed the bladder. A male catheter was introduced into the rectum and an opening made. The mucous membrane of the ureters was sutured to that of the rectum, the knots being placed in the

bowel and additional catgut sutures inserted. The wound was tamponed. The patient, who had had bronchial catarrh previous to the operation, died of a lobular pneumonia. The catgut sutures of the ureters gave away too soon and allowed urine to flow through the wound. Küster was induced to perform this operation by the success which he had in the treatment of a case of vesico-vaginal fistula by Rose's method. He made a fistulous communication between the vagina and rectum and then closed the vagina. The patient was thus enabled to retain the urine for two hours in the rectum.—*Univ. Med. Mag.*

SUBMUCOUS RESECTION OF THE INTESTINE.

Dr. Kummer finds that the chief fault of the ordinary suture of the intestine is its tendency to cause a stenosis, which may be followed by intestinal obstruction, perforation, or paralysis. To remedy this disadvantage he has undertaken experiments on animals, and was led to adopt the following method: He dissects a cylindrical flap of mucous membrane, about 1½ cm. long, from the transverse section of the gut, and then unites mucous membrane with mucous membrane. The sero-muscular flaps are folded back in such manner that the serous margins are approximated, and sutured in this position. The sutures which in the ordinary Lembert suture protrude into the gut are placed on the outside of the intestine and thus do not narrow the lumen.—*Centralbl. f. d. gesammte Therapie*, August, 1891.

SPECTROSCOPIC EXAMINATION OF THE BLOOD IN SURGERY.

At the recent French Surgical Congress M. M. Henocque and Bazy reported the results of a series of examinations of the blood with the spectroscope made on persons who were compelled to undergo surgical operations. According to these investigations the demonstration of the quantity of hæmoglobine in the blood affords the surgeon some valuable information in cases where it is necessary to decide whether the patient's health is sufficiently good to permit of the performance of an operation which may not be urgently required. In ovariectomies and laparotomies undertaken for the removal of tumors it is of advantage to determine the degree of anæmia and the condition of nutrition by this method, so that the operator may be able to select the most favorable time for operation.

The authors also made some exceedingly interesting experiments with the view of studying the effects of chloroform anæsthesia upon the quantity of oxy-hæmoglobin in the blood and upon tissue metamorphosis. These investigations were carried on before, during and after the performance of surgical operations. It was demonstrated in eight cases of major operations that chloroform actually tends to augment the quantity of hæmoglobin in the blood, unless a condition of asphyxia is produced, and that this quantity may remain stationary despite severe losses of blood. One of the constant effects of chloroform anæsthesia, however, is to retard the reduction of oxy-hæmoglobin; that is to say, it decreases tissue metamorphosis. These phenomena therefore illustrate that chloroform does not exert a toxic influence on the blood, although it has a marked effect in retarding the vital chemical processes in the body. In cases of sudden death at the commencement of chloroform anæsthesia a complete arrest of tissue metamorphosis takes place, and to this, in the authors' opinions, should be attributed the extraordinary severity of this form of syncope. They also believe that these facts demonstrate the advantage of determining before operation whether an individual tendency to retarded tissue metamorphosis be present.

In our last year's August number we commented upon some experiments of Prof. Mikulicz relating to the same subject. In striking contrast to the results obtained by M. M. Bazy and Henocque, however, Dr. Mikulicz found that the prolonged administration of chloroform produced a decrease of hæmoglobine even in operations unattended with loss of blood. This fact simply illustrates the wide discrepancy in the results obtained by different investigators of the same subject.—*Internat. Jour. Surg.*

COMPRESSION OF THE CAUDA EQUINA— REMOVAL OF A TUMOR—RECOVERY.

Laquer reports in the *Neurolog Centralblatt*, 1891, No. 7, the case of a young man, aged 19, who had been suffering since September, 1888, from violent pain in the sacral region. The patient himself localized the pains from the very beginning in the interior of the sacral bone. At night, and frequently during the day, after long continued sitting and standing the pains become more violent. Finally he had to abandon his work, but absolute rest, careful treatment and various remedies failed to procure re-

lief. Status in December, 1889: no impairment of motor power or of sensibility, no muscular atrophy; electrical reactions, deep reflexes, vesical and rectal functions normal; no incoördination. The dull, piercing pains were so acute at night that they deprived the patient of sleep; they irradiated occasionally on the posterior surface of the thigh down to the fossa poplitea. Galvanic treatment and chloral gave much relief, so that the original diagnosis—neuralgia of the plexus sacralis, perhaps neuritis—seemed corroborated. But in March, 1890, the pains returned and in September very large doses of chloral and morphine were of little avail. At that time the principal symptoms were: strictly localized pain in the middle of the os sacrum, pain on pressure at the same spot; both muscoli recti femoris weak and slightly atrophied; transient paresis of bladder and rectum; the knee-jerk abolished on one side and very faint on the other; sexual functions feeble; decubitus on the right trochanter; complete absence of all inflammatory changes in the vertebral joints and in the bones; no R. D. Due consideration of the symptoms and the exclusion of any disease originating in the rectum or the pelvic organs led to the diagnosis of compression of the cauda equina caused by some neoplasm in the canalis sacralis. Dr. Rehn, having opened the sacral canal from the hiatus sacralis almost to the last lumbar vertebra, corroborated the diagnosis; for he found a soft tumor of the thickness of the little finger extending from the middle of the sacral bone into the vertebral canal; the tumor was extradural, not adherent to roots or to the dura mater, but it had exerted a strong pressure on the cauda equina and the dura. Weigert showed the tumor to be a lymph-angioma cavernosum. Status three months after the operation: The pains in the back have disappeared completely. The patient sleeps three or four hours in the night without an hypnotic. Occasionally there are slight pains in the left sciatic nerve. He walks for three or four hours without fatigue. No vesical or rectal trouble. The knee-jerks are easily elicited and are equal on both sides.

GYNÆCOLOGY.

GONORRHOEA IN THE FEMALE.

Bumm (*Centralblatt für Gynäkologie*, 1891, No. 22), from a long study of this subject concludes that gonorrhœa in women is a process limited to the superficial layer of the

mucosa; the cocci invade the epithelial layer, but are always arrested when they reach the submucosa. The epithelium is originally cast off by reason of the active suppuration, but is quickly renewed, assuming the pavement form; after this change has occurred the active invasion of gonococci is usually arrested, but they continue to grow in the secretion, in which they may persist for months and years. The gonococci have no connection with septic processes; they do indeed cause suppuration of the mucosa, but are destroyed when they reach the subjacent connective tissue. If sepsis develops it must be in consequence of mixed infection; septic germs are frequently present in gonorrhœal pus, and a favorable nidus for the reception of external germs is offered by the purulent genital secretion. The urethra and cervical canal are the favorite seats of gonorrhœal infection; acute gonorrhœa of the cervix gives rise to symptoms only at the outset, but after it has become chronic it may exist for years without causing disturbances, unless it extends to the corpus uteri and thence to the tubes.

The cocci possess no power of spontaneous movement and extend only short distances by proliferation. Extension over larger surfaces must be through the agency of the secretion. Normally the cervical secretion cannot pass the os internum, which also serves as a barrier to the entrance of the specific infection. Menstruation favors the admission of cocci into the uterine cavity, also certain mechanical causes, such as coitus, the introduction of sounds and intra-uterine medication; lastly, this is liable to occur during the puerperium. After they have reached the cavity they again remain stationary, and probably are only carried into the tubes from the causes already mentioned, the puerperium being the most favorable time, as the proximal openings of the tubes are then more patent. In fifty-three patients with gonorrhœa, who were kept under observation for at least five months after the initial symptoms developed, the cervix was infected in 75 per cent., the corpus uteri in 15 per cent., and the tubes in only 3.5 per cent.

PRIMARY CANCER OF THE CLITORIS.

Dr. F. J. Merkle (*Centralbl. f. Gynäk.*, October 3rd, 1891) observed this disease in a woman, aged 61. At the site of the clitoris was a tumor of about the size of an apple, already beginning to break down. There was an indurated gland as big as a walnut

in the left groin. The tumor of the clitoris was removed by means of the thermocautery. The patient died seventy-three days after the growth was removed. At the necropsy epithelioma of the clitoris, with metastatic deposits in the lymphatic glands, was discovered. Dr. Merkle believes that the clitoris was most probably the seat of the primary disease in this case.

REMOVAL OF OVARIES FOR EPILEPSY.

F. Howitz and Leopold Meyer (*Gynäk. of Obstetr. Meddel.*, vol. viii, parts three and four, 1891) describe four cases. The results are, on their own admission, discouraging. The cases were under observation for from two and three-quarters to four years. In all the ovaries were more or less diseased. In one case only was the patient cured. The fits increased during pregnancy. In the second the same symptom was observed, but after the operation the patient's condition was but slightly improved. In the third and fourth no improvement followed lactation, yet in the third the epileptic fits had always increased in number and severity during catamenial periods, and from thirteen months after the operation no show ever appeared. In the fourth the fits had ceased for four years, and recurred when the patient was suckling. All the four patients had been subject to fits for over seven years, the first or successful case having been epileptic for thirteen years at the least. In three out of the four complete amenorrhœa followed the operation. In the third there was a typical irregular hæmorrhage from the sixth to the thirteenth month after the oöphorectomy.—*Brit. Med. Jour.*

OBSTETRICS.

LABOR IMPEDED BY PARASITIC FÆTUS.

Dr. Westerschulte (*Nouvelles Archives d'Obstêt et de Gynéc.*, August 25th, 1891) was called in to a labor case by a midwife, who could not deliver the child though its head was already born. He found that the child was half born, its trunk being exposed as far as the umbilicus. He relaxed the cord and then attempted to extract the child, which was still living and had passed the seventh month of intrauterine life. Though he used much force the trunk remained fixed, and he began to suspect twin pregnancy with adhesion of the twins. He placed the patient across the bed, and on careful exploration detected a soft mass

behind the breech, which felt like a second bag of waters. After firm traction for about a quarter of an hour the child was suddenly delivered. It made a few feeble respiratory efforts, but could not be kept alive. A big cystic body hung down from the child's breech; it was double the size of the head, and contained a placenta-like structure and a piece of cartilage an inch and a half long. The child was a well-formed male; there was no anus, the rectum opening into the cyst, which clearly represented a parasitic fœtus. —*Brit. Med. Jour.*

THE TREATMENT OF POST-PARTUM HÆMORRHAGE BY MEANS OF THE DUHRSEN UTERINE TAMPON.

In the *Therap. Monatshefte* Dr. Everke writes that post-partum hæmorrhages are either due to lacerations of the vaginal mucous membrane and cervix, or else they arise from the uterine cavity when this organ does not contract firmly after expulsion of the fœtus (atonia uteri). The hæmorrhages of the first variety can always be controlled by sutures, but the cases of uterine atony in which no effect is produced by using ergotin, compression, or rubbing with the hand require other treatment. Dührssen's method of using the tampon is the surest, simplest, least dangerous, and most readily carried out of all the methods. The technique is as follows; The hair about the pubes is to be carefully scrubbed with soap and water, the vagina washed out with a thirty-per-cent solution of carbolic acid or a sublimate solution of one to one thousand. For tamponing we employ from three to six metres of ten-per-cent iodoform gauze, eight centimetres wide. The left hand grasps the uterus and presses it downward; then (when no speculum is employed) the gauze is pushed up through the cervical canal with the right hand (employing two fingers) to the fundus. In a short time we feel a board-like contraction and the hæmorrhage ceases. The tampon is removed at the end of twenty-four hours. The author explains the action of the tampon in this way: that the raw material produces an irritation of the uterine muscle, the contracting organ presses its walls firmly against the tampon, the lumen of the vessels becomes closed, and the hæmorrhage ceases. (It is consequently not advisable to tampon the uterus too firmly). The tampon may also be employed in cases of puerperal hæmorrhage and in slight lacerations.

MORRENIA BRACHYSTEPHANA—A NEW GALACTAGOGUE.

Senhor Pedro N. Arata describes (*Revista Farmaceutica*, Buenos Ayres, No. 5, 1891) the chemistry and properties of the above plant, which is a member of the *Asclepiadaceæ* growing in the Argentine Republic and other parts of America. An infusion of the roots has long enjoyed a local reputation as a galactagogue, and the author has endeavored to determine the active principles to which such action may be due. For this purpose he made the following examination: (1) Extraction with ether: Nothing but a small quantity of chlorophyl, fatty acids, and resin could be obtained by prolonged maceration of the powdered root with this solvent. (2) Extraction of residue by alcohol: An alcoholic extract of the remaining root was made. Of this a portion (resin) was insoluble in water, the remainder forming a red solution, which contained malate of calcium, chlorides of potassium and sodium, and a substance giving alkaloidal reactions with the ordinary tests. No volatile alkaloids were found, the only other noteworthy substances separated being starch, albumen, and gum. By the Stas-Dracendorff method the alkaloid could be obtained as a dark reddish mass, of pleasant odor and very bitter taste, soluble in chloroform, water, and amylic alcohol. An accurate analysis of this substance could not be made owing to the small quantity available. (3) Active principles of the fruit juice: From the expressed juice of the fruit there could be obtained small quantities of the same alkaloid together with a glucoside. This latter substance is probably closely allied, though not identical, with a glucoside isolated by List from *Asclepias cyriaca*. The author does not appear to have yet worked out the physiological action of either of these substances, but, from an experience with a fresh infusion of the root, he is inclined to believe that the plant has valuable galactagogue properties. —*Brit. Med. Jour.*

PÆDIATRICS.

IODOFORM VAPOR IN WHOOPING-COUGH.

At a meeting of the Société Médicale des Hôpitaux on July 17th (*Rev. Gén. de Clin. et de Thér.*, July 22d, 1891), M. Chantemesse read, in the name of Dr. Chibret, of Clermont-Ferrand, a communication on the

effect of iodoform vapor in the treatment of whooping-cough. The method consists in sprinkling the room in which the patients live with iodoform. Under this treatment, children presented a marked diminution in the frequency of the paroxysms, and the duration of the disease was shortened. No symptoms of poisoning were observed.—*Brit. Med. Jour.*

TREATMENT OF DIPHTHERITIC AND DIPHTHEROID CONJUNCTIVITIS.

Abadi (*Rev. Mens. des Mal. de l'Enf.*, August, 1891) writes that in the literature concerning the treatment of ophthalmia there is nothing precise which is to be found. Some advise the use of nitrate of silver, others warm, and others iced compresses. Others still recommend a great variety of antiseptic solutions. In most cases the eyes have been lost, cures being exceptional. Since Fieuzal and Coppaz recommended the use of lemon-juice for this disease, the author has frequently made use of it, and always with satisfactory results. It was used fearlessly, for it was believed to be harmless to the cornea. During the three or four days in which the disease is most threatening it must be used every five hours, night and day. Subsequently the intervals can be lengthened to eight, then to twelve hours, and then it can be discontinued altogether. This treatment is useful not only in pure diphtheritic forms of the disease, but also in the diphtheroid forms. It is believed that nitrate of silver is very injurious in the treatment of this disease.

CLINICAL AND BACTERIOLOGICAL STUDY OF SCARLATINOUS ANGINA.

In a careful and conscientious thesis, Dr. Bourges divides the angina of scarlet fever into the erythematous variety, which may or may not be accompanied by a pultaceous deposit, the pseudo-membranous and the gangrenous forms. The pseudo-membranous may be subdivided into precocious or tardy, the first of which is often benign, does not extend, and produces little or no effect upon the general condition. Late pseudo-membranous angina, on the contrary, would seem to be most often of diphtheritic character, although the occurrence of very benign examples leaves this point doubtful, and a decision can only be reached by bacteriological investigations. The gangrenous form is the most severe, and is accompanied by special characteristics.

His experiments with the inoculation of streptococci found in scarlatinous angina have led him to conclude that "the anginas of scarlatina are due to a secondary infection by pyogenic streptococci in the erythematous angina, in most cases of precocious pseudo-membranous angina, and in certain cases of tardy pseudo-membranous angina." The streptococci found in the suppurations which so often complicate scarlatina generally enter the system through the tonsils, which are infected from the beginning of the disease.—*Revue de Laryngologie*, etc., Aug. 1st, 1891.

HYGIENE.

SANITARY TRIUMPHS.

In an interesting article in the June issue of the American Statistical Association's quarterly publication, we find some significant facts regarding the advantages of sanitary legislation experienced in England within the past sixteen years. In the year 1875 a general law was passed in England for the protection of the public health, known as the Public Health Act, and from that time the death rate in England has decreased for all diseases which owe their origin and growth to defective drainage and impure water supply. Typhoid fever is such a disease, and the diminution of 57 per cent. in the death rate from this malady is undoubtedly the greatest triumph for sanitary reformers. During the ten years from 1866 to 1865 the annual mortality was 22.19 per thousand inhabitants; and from 1888, the first year of careful registration, to 1865, the average annual rate was about 22.35 per thousand. But for the ten years of the period 1880 to 1889 the average falls to 19.08. It seems justifiable to ascribe this diminution in the death rate to the operation of the Public Health Act, and the execution of duties such as drainage, inspection of water-supplies, vaccination, and others which are becoming better understood. Mr. Farr, in his *Vital Statistics*, estimates the value of human life in England to be about \$770 a head; that is, the value inherent in the people as a productive money-earning race. If we suppose, which is allowable if other things remain the same, that this diminution of the death rate during this last decade was due to the measures taken to that end, we find that the number of lives saved, representing a total for the decade of 856,804 persons, according to Mr. Farr's estimate

represents a social capital of \$650,000,000. Thus in ten years the country has more than regained the sum that was spent in sanitary improvements in the fifteen years, and in this calculation nothing figures for spared grief, better health and happier life. This diminution of mortality is not observed in in all forms of disease. The mortality from zymotic diseases, from 1861 to 1870, was 42.54 per 10,000 living and this was reduced to 24.52 in the period from 1880 to 1889, but measles, diphtheria, whooping-cough appear to have escaped the influence of sanitary measures. Consumption has equally diminished in England in these last years. The mortality from this cause in the years 1861 to 1870 was 24.89 per 10,000 living. For the period 1880 to 1889, it fell to 17.36. The statistics further demonstrate that sanitary measures affect the death rate of young persons between the ages of one and twenty-five years, and especially between ten and twenty years. The gain in this latter decade, which amounts to 28 per cent., is economically a great gain. The death rate for old persons has increased during the last decade, a fact which may be chargeable to the bustle of the nineteenth century, the wear and tear upon the nervous system, while the effect of sanitary improvement is most noticeable in the abatement of infant mortality.—*Amer. Analyst.*

THE INFLUENCE OF WEATHER ON DISEASE.

We may regard it as certain that an apparent connection between infectious diseases and atmospheric conditions had suggested itself to the medical mind long before Sydenham attributed to the atmosphere an "epidemic constitution." The influence of weather would be measured by its effect in providing an environment suitable to germ development. Thus moist weather, whether bleak or warm, would be found conducive to the spread of contagia, and so it is. This fact has often been attested by the extension of cholera, diarrhoea, and the exanthemata. A warm and dry day, on the contrary, tends to check morbid action of an infectious kind. This fact is susceptible of more than one explanation. We may, on the one hand, regard it as a consequence of the absence of that germ forerunning condition—humidity; on the other, we cannot fail to be reminded that dry warmth and sunshine give the signal for an exodus from many crowded homes,

for their freer ventilation, and consequently for diminution in the intensity of contagia. The exact value of weather changes in regard to this class of diseases, however, still is and must for some time remain *sub judice*. As for the ailments more usually associated with these changes—those for example, more commonly known as inflammatory—the connection is here much more evident, and also in all likelihood more direct. The association of pneumonia, bronchitis, asthma, and rheumatism with bleak and wet weather is too invariable to permit of our doubting its reality apart from any suggestion of septic agency.—*Lancet.*

MEDICAL CHEMISTRY.

LINAMARIN.

MM. Jorissen and Hairs (*Journ. de Phar. d'Anvers*) have obtained from *Linum usitatissimum* a nitrogenous glucoside, which differs from amygdalin and laurocerasin, and is the source of the hydrocyanic acid which that plant disengages abundantly under certain conditions. Linamarin occurs in the form of colorless and odorless needles, having a very cooling and bitter taste. Is soluble in its weight of water, also in alcohol, but almost insoluble in ether. It is distinguished from amygdalin by several physical and chemical characteristics, which are summed up in the following comparative tables:

AMYGDALIN.

Little soluble in cold water, (1 part in 12).
Parts with its water at 120° C. melts and decomposes at 200.

Colored purple by strong sulphuric acid.
Contains 52.51 per cent. of carbon, and 3.06 per cent. of nitrogen.
Is reducible by adding an emulsion either of almond oil or of linseed oil.
Benzaldehyde present in reduction products.

LINAMARIN.

Very soluble in cold water, (equal parts).
Retains its water at 120° C.; melts at 134°, and bears a heat of 150° without decomposing.

Not colored by strong sulphuric acid.
Contains 47.88 per cent. of carbon, and 5.55 per cent. of nitrogen.
Reducible by adding a linseed emulsion, but not by one of almond oil.
No benzaldehyde in reduction products.

ON THE PRESERVATION OF LUNAR CAUSTIC.

M. Bartle, pharmacist of the Vincennes Military Hospital, after an exhaustive study of the matter, concludes that coriander seed, linseed, etc., usually used in the preservation of lunar caustic are more or less deleterious, and recommends in their place powdered or

shredded asbestos that has previously burned, or thoroughly dried, well-dried sand, or, by preference, granulated pumice stone. To obtain the latter it is only necessary to beat the commercial pumice stone in a mortar, and to sift it through a brass sifter in such manner as to get the grains about the size of shot used for bottle cleaning. The fine dust is gotten rid of by sifting in the usual way.

CLIPPINGS AND NEWS ITEMS.

THE ASSOCIATION OF MILITARY SURGEONS OF THE NATIONAL GUARD OF THE UNITED STATES.

The second annual session of the Association of Military Surgeons of the National Guard of the United States will be held at St. Louis, April 19th, 20th and 21st, 1892. An interesting programme of addresses by prominent surgeons of the National Guard and the United States Army has been arranged, and a goodly number of scientific papers on Military and Accidental Surgery will be read and discussed, and all matters pertaining to the health, usefulness and welfare of the civilian soldiers will receive attention.

COCAINE IN NERVOUS ASTHMA.

Prof. Da Costa recently treated with marked success a case of pure nervous asthma with one-fourth grain of cocaine per diem. After obtaining the desired result the remedy was given only twice afterward, and but once a day.

SALICYLIC ACID AS A DIURETIC.

After a series of investigations on this subject, Huber concludes that salicylic acid is one of the safest and most important diuretics. The greatest increase in the amount of urine seems to occur in rheumatic fever and serious pleurisy, whether the temperature is raised or not. In all cases the total loss of water by the skin and urine was increased, and the solids of the urine were increased. In ordinary pleurisy, and in four cases of cardiac dropsy the drug acted well.

SODIUM SALICYLATE IN RENAL COLIC.

M. Fay, in the *Wiener Med. Blatter*, praises the beneficent action of sodium salicylate in the treatment of nephritic colic. He declares that under its influence the cal-

culi are rapidly eliminated and the patients restored to health. If true, this is indeed a boon to suffering humanity, as few tortures are so acute as those of renal colic, and none have hitherto been more rebellious to treatment. Sodium salicylate has also been highly recommended in hepatic colic.

LA GRIPPE.

The "grip"
When you get it
You'll fret it
As it wears you
As it tears you
You'll abuse
While you lose
Your grip;
Not the same,
'Cept in name,
As that other diabolic, pathogenic and
prodromic, mucous quirking, top-knot
wracking, jointlets cracking, stomach-
working, body-burning, brainpan murk-
ing, nerves all churning affliction which
is called—
Or by aesthetic people bawled
The "influenza" but, for short
When with cold in head you snort
And your temper's on the snip
It's just ordinary "grip."
And its metabolic
Worse than colic
Poison's in your blood
And you wish your name was mud.
Until in sullen fury you let everything
just rip—
While in doleful chorus groaning
Your family are moaning
In a sort of runic rhyme
With their vitiated chyme
The solo of the grip.
Not the pip
But the grip, grip, grip
From its talons you can't slip
But must sit and in your person
(For all its woes a curse on)
Exemplify its rule;
And every one's a fool
When the whisky bottle's drip
And the quinine mixed you sip
And pay out pelf
To rid yourself
Of that all-effecting
Naught-delecting
Old world rip,
The grip.

—*Phila. Press.*